Dynamic changes in the construct of engagement in the pre-vocational second language classroom

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rijksuniversiteit groningen

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Februari 2020

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Date of completion: 11-02-2020
Word count: 14.828

Abstract

The concept of engagement is a multidimensional construct consisting of behavioural, cognitive, emotional and social components. This refers to the feelings, thoughts and behaviour of students. These multifaceted components overlap and are interdependent. Researching engagement longitudinally has been done from a range of different theoretical frameworks. An overarching framework is needed. Complex Dynamic Systems Theory is employed to investigate the interplay of the different components. Furthermore, not much engagement research has been done at Dutch *voorbereidend middelbaar beroepsonderwijs* level. The current study a variation of earlier work done by Sulis (2019). A combination of classroom observations, a stimulated recall procedure based on a video-recording of the lesson and cued retrospective interviews are used. Results show the same patterns. It is opted that a provision of a supportive, highly involving and interactive classroom atmosphere can contribute to sustain engagement. Activities need to have a clear purpose, be interactive and connected with learners' life and interests, and be varied in nature and short in length.

Key words: engagement, Complex Dynamic Systems Theory, language teaching, second language classroom, pre-vocational education

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Introduction

The multidimensional construct of engagement refers to the feelings, thoughts and behaviour of students in a general learning environment or to specific learning activities. Engagement can be regarded as the result of interaction between a student and its environment. It is therefore susceptible for changes in learning environments and admissible for interventions. In the current study the construct of engagement is approached as a multidimensional construct consisting of behavioural, cognitive, emotional and social components. Christenson, Reschly and Wylie (2012) showed that these components overlap and are interdependent constructs. They also emphasized the importance for learning as engagement drives learning: "it requires energy and effort and is affected my multiple contextual influences; and can be achieved for all learners" (p. 817). A better understanding will thus lead to more adequate learning environments.

Behavioural engagement refers to the actual participation of students during activities in a lesson. Behavioural engagement is recognized by Philp and Duchesne (2016) as being 'on task'. Cognitive engagement relates to the willingness to perform a task as well as the use of self-regulating strategies to execute these tasks in a successful manner. According to Skinner and Pitzer (2012), cognitive engagement encompasses both the use of metacognitive strategies and personal investment in learning. Emotional engagement refers to the affective attitudes of learners. Emotional engagement refers to the feelings and emotional reactions to an activity, confidence in one's skills and thoughts about the importance of a task. Social engagement is seen as learners' attitudes towards the school, their teachers, and their peers. Social engagement is seen as the quality of social interaction while learning (Wang et al., 2016).

Researching engagement longitudinally has been done, but from a range of different frameworks and theories. Thus, a consensus on (the definition of) engagement has been slow to form (Azevedo, 2015). A comprehensive, overarching framework is therefore desperately needed to achieve a consensual grasp on the construct of engagement. Complex Dynamic Systems Theory is an approach to second language acquisition which states that language learning is a complex system of interacting factors (De Bot, Lowie & Verspoor, 2007). This may be a framework to understand the interplay of the different components. Furthermore, not much engagement research has been done at Dutch *voorbereidend middelbaar beroepsonderwijs* level. The purposefulness of this study is fueled by overlap and discrepancies between the different components of the construct of engagement, a lack of research into engagement from a Dynamic Systems Theory point of view, and by a lack of research conducted in an authentic classroom context for pre-vocational secondary education.

In this study, an integrative model of engagement will be employed and a dynamic systems theory view is used as a paradigm to conceptualize engagement as it proceeds on a moment by moment basis in a classroom setting. The present study is a variation of earlier work done by Sulis (2019). A combination of classroom observations, a stimulated recall procedure based on a video-recording of the lesson and cued retrospective interviews will be used. It is hypothesized that in general a provision of a supportive, highly involving and interactive classroom atmosphere can contribute to sustain both short and long-term engagement.

Background

The multidimensional construct of engagement refers to the feelings, thoughts and behaviour of students in a general learning environment or to specific learning activities (writing, reading, and listening). Philp and Duchesne (2016) describe this concept as "a state of heightened attention and involvement, in which participation is reflected not only in the cognitive dimension, but in social, behavioral, and affective dimensions as well" (p.3). This definition seems to partially overlap with another facet of learning: motivation. However, the crucial difference between motivation and engagement is that the former is about the reasons for behavior and the latter about the connection between person and activity (Russel, Ainsley & Frydenberg, 2005; Ainley, 2012). Thus, motivation does not necessarily reflect the actions of an individual at a particular time, but merely the intention of action.

Multidimensional construct of engagement

The purpose of the following sections is not only to explore how the behavioural, cognitive, emotional and social components of engagement are discussed in literature, but also to identify links and overlaps between these dimensions.

Engagement can be regarded as the result of interaction between a student and its environment. It is therefore susceptible for changes in learning environment and admissible for interventions. In a seminal article by Fredricks, Blumenfeld and Paris (2004) engagement is described as a multidimensional construct that includes behavioural, cognitive and emotional components. In a review article, Philp and Duchesne (2016) proposed to add a fourth component: social engagement. According to them, the social aspect in instructed language learning cannot be ignored. Each of these components is considered important in instructed language learning, but mostly approached in isolation (Schumann, 1997; Swain, 2013; Philp & Duchesne, 2008; Svalberg, 2009). Christenson, Reschly and Wylie (2012) showed that these components overlap and are interdependent constructs. They also emphasized the importance of engagement for learning as it drives learning: "it requires energy and effort and is affected my multiple contextual influences and can be achieved for all learners" (p. 817). A better understanding will thus lead to more adequate learning environments.

In the current study the construct of engagement is approached as a multidimensional construct consisting of behavioural, cognitive, emotional and social components. Behavioural engagement refers to the actual participation of students during activities within a lesson. Cognitive engagement relates to the willingness to perform a task as well as the use of self-regulating strategies to execute these tasks in a successful manner. Emotional engagement refers to the feelings and emotional reactions to an activity, confidence in one's skills and thoughts about the importance of a task. Social engagement is seen as learners' attitudes towards the school, their teachers, and their peers.

Behavioural engagement

Behavioural engagement is recognized by Philp and Duchesne (2016) as being 'on task'. Overall, it has been operationalized in the literature in terms of effort, attention, and persistence, as well as resilience to challenges, cooperative and autonomous participation and initiative taking (Finn, Pannozzo & Voelkl, 1995; Buhs & Ladd, 2001). In the past years, a substantial amount of research has been carried out on this type of engagement (Lawson & Lawson, 2013). Behavioural engagement has been defined under different levels and under various theoretic frameworks (Fredricks et al. 2004; Lawson & Lawson, 2013; Sinatra, Heddy, & Lombardi, 2014). Generally, research has been done at school, classroom, and academic activity level.

At school level, behavioural engagement has been investigated and construed in relation to students' participation in school-related activities (Finn, 1993; Finn et al., 1995). At classroom level, behavioural engagement has been described in terms of positive classroom conduct. In this view, students who are classified as being behaviourally engaged are in compliance with classroom norms and therefore avoid disruptive behaviour (Finn, 1993; Finn et al., 1995; Finn & Rock, 1997; Finn & Zimmer, 2012; Griffiths, Liles, Furlong, & Sidhwa, 2012; Rumberger & Rotermund, 2012). At an academic activity level, participation and involvement in learning tasks are characteristics of behavioural engagement. Such students do not only show concentration and attention in learning activities, but also ask questions, contribute to class discussions, and an overall willingness to put in effort and persistence (Skinner & Belmont, 1993; Birch & Ladd, 1997; Fredricks et al., 2004; Skinner, Kindermann, Connell, & Wellborn, 2009; Heddy, Sinatra, Seli, & Mukhopadhyay, 2014). In SLA research, word count (Bygate & Samuda, 2009) and turn count (Dörnyei & Kormos, 2000) have been used to measure behavioural engagement. Lambert, Philp and Nakamura (2017) looked at semantic content produced by students and the amount of time they invested in performance. In SLA motivational research, Guilloteaux and Dörnyei (2008) looked at learners' attention, volunteering for activities, and participation. They defined behavioural engagement as 'motivated behaviour'.

Previous research has been divided as to where to draw lines between the different components of engagement. That is not entirely unexpected as a result of their mutual interdependence (Philp & Duchesne, 2016). The boundaries between behavioural and cognitive engagement regarding effort are especially a focus of discussion. Fredricks et al. (2004) underlined the importance to differentiate between behavioural effort (carrying out a learning activity) and focused effort (power of intention). Attention has also been described by them as a descriptor of behavioural engagement. However, several researchers consider attention a feature of cognitive engagement instead (Helme & Clarke, 2001; Pekrun & Linnenbrick-Garcia, 2012; Skinner and Pitzer, 2012; Philp & Duchesne, 2016, Lambert et al., 2017). Gettinger and Walter (2012) claim that a predictor for academic achievement is the amount of time students are actively involved on a task. Behavioural engagement has a positive impact on learning and its relevance is shown through identification with school (Voelkl, 1995; 2012), academic achievement, increased retention, and reduced drop-out rates (Fredricks et al., 2004; Reschly & Christenson, 2012). Finn and Zimmer (2012) consider behavioural engagement more as a continuum. Successfully completing a task depends on the degree and quality of participation.

Using Social Cognitive Theory (Bandura, 1986), Sulis (2019) provided an extensive model of the construct of engagement after following advanced learners of L2 French from first-year university level classes for a year. In summary, behavioural engagement is affected by class participation, initiative taking, persistence to challenges, and effort expenditure. Class participation is influenced by teacher(s) and peer(s), the value ascribed to participation for a certain achievement, and types and features of a particular task. Initiative taking is determined

by confidence and interest of the student, and also the overall classroom dynamics. A student's persistence to challenges is based on task difficulty, learning on peers and the attributed value of persistence for subsequent learning. Finally, effort expenditure is influenced by task type, task enjoyment and task difficulty.

Sinatra et al. (2014) argued against behavioural engagement being considered a strong predictor for achievement. They proposed that behaviourally engaged learners might not be necessarily cognitively engaged in a task, especially when higher order processing strategies are required. Likewise, Eccles (2016) makes a distinction between acted-out behaviour that is cognitively controlled by an individual and easily observed (behavioural) and the different types of advanced cognition which is needed for tackling complex learning material (cognitive). The latter related to higher processing strategies and deep thinking which will be further expanded upon in the next section exploring the component of cognitive engagement.

Cognitive engagement

According to Skinner and Pitzer (2012), cognitive engagement encompasses both the use of metacognitive strategies and personal investment in learning. They propose that this type of engagement also includes attention, concentration, focus, absorption, and to participate in a manner that goes further than required. As stated in the previous section, attention can also be seen as a predictor for behavioural engagement and is not included in the following definitions of the construct.

Like the other components of engagement, cognitive engagement has been approached from different theoretical frameworks and within different contexts. Lawson and Lawson (2013) identified two main research strands in this domain. One strand focuses on the psychological investment in learning expanding to general disposition and feelings towards learning and school work (Wehlage & Smith, 1992; Birch & Ladd, 1997). Along this line of thinking, cognitively engaged students are seen as learners who are willing to make a special effort to get more than a good grade or grasping the content of a class (Newmann, Wehlage, & Lamborn, 1992). Other definitions for this type of behaviour are 'substantive engagement' (Nystrand and Gamoran, 1991) or 'authentic achievement' (Newmann & Welhage, 1993). These manifestations are also closely related to commitment to learning which has also been defined as a descriptor of emotional engagement. (Anderman & Patrick, 2012). This coincides with and highlights the mutual interdependence again between different forms of engagement. The second strand associated with cognitive engagement aims to explain the construct from the point of learners' cognition and their self-regulation and strategic thinking during activities. From this point of view, a cognitively engaged student employs its thinking in such a manner it only applies to the task at hand (Helme & Clarke, 2001). Other research also identified the use of self-regulation strategies in order to master cognitively complex tasks (Pintrich & De Groot, 1990; Pintrich & Garcia, 1991; Pintrich, Wolters & Baxter, 2000; Cleary & Zimmerman, 2012).

Cognitive engagement, thus, has many facets and the following studies in chronological order each focused on the different manifestations of this component. Connell and Wellborn (1991) made use of surveys and included flexible problem solving, preference for hard work, independent work styles, and ways of coping with perceived failure as measures of cognitive engagement. Lee and Anderson (1993) and Lee and Brophy (1996) noted that clarification requests, use of analogies and employing prior knowledge to assess the task were all observable indicators of cognitive engagement. Appleton, Christenson and Furlong (2008) noted goal setting and the value of learning with relevance to their future aspirations as indicators for cognitive engagement. This encompasses personal investment where students apply strategies to reach their goals and therefore self-regulating the need for engagement. Value of learning is

considered as a part of emotional engagement by other researchers (Finn, 1989; Voelkl, 1995; 1997). Self-report methods have also been used to measure cognitively engaged learners. A considerable useful aspect of these self-reports is that they can give insight into cognitive strategies otherwise not directly observable (Fredricks & McColskey, 2012). Lambert et al. (2017) include a wide arrange of indicators of cognitive engagement including peer interaction, sharing of ideas, evaluating ideas, explaining, informing, directing, providing justification, and asking questions to peers and/or teachers. In SLA research, Svalberg (2009) linked learners' alertness and attention to the component of cognitive engagement. This was more widely operationalized by other researchers where language use was employed as a measure for cognitive engagement (Storch, 2008; Svalberg, 2009; Baralt, Gurzynski-Weiss & Kim, 2016). They made use of so-called Language Related Episodes (LREs). LREs, as defined by Swain and Lapkin (1998), are "any part of dialogue where the students talk about the language they are producing, question their language use, or correct themselves or others" (p.326) and more generally described as a communication and cognitive device. In a similar fashion, Bygate and Samuda (2009) looked at self-corrections and negation of meaning to measure cognitive engagement. According to Helme and Clarke (2001), cognitive engagement is comprised of processes such as sustained attention and mental effort, often along with self-regulation strategies. They also identified a wide set of indicators of cognitive engagement in collaboration activities, including: giving explanations of assignments and how to tackle problems, exchanging ideas, completing utterances of other students, questioning and justifying their argument. The construct can be expressed by students by phrases such as "I think", "because" and questions. It can also be reflected in hesitations, reformulations or repetitions. This would indicate that a student is actively thinking about the task at hand. Cognitive engagement is not only evident in spoken form, but may also be observed in gestures, facial expressions and body positioning. Helme and Clarke (2001) do observe that students who verbalize their thought processes were easier to index as cognitively engaged.

However, the above markers of cognitive engagement are not exclusive to this construct. As noted by Fredricks et al. (2004), student might employ self-regulating strategies without being actually actively invested in learning the material. An adverse pattern was also observed: students who might be willing to learn the material may not possess the necessary skills or knowledge to employ certain self-regulating strategies. Identifiers such as concentration, focus and absorption proposed by Skinner and Pitzer (2012) have been defined by other researchers as heightened interest of states of intense concentration and therefore possess qualities of cognitive, behavioural, as well as the emotional component of engagement (Csikszentmihalyi; 1997; Egbert, 2003; Eccles, 2016). These conflicting and/or overlapping interpretations between the different types of engagement shows that distinctions and definitions of the construct are not always crystal clear and can show great variation based on the theoretical frameworks and contexts wherein previous research has been carried out.

Furthermore, there are still other problems pertaining to the operationalization of cognitive engagement and its measurement is considered particularly challenging. This is not only due to overlap between components of engagement, but also overlap between cognitive engagement and motivation. In motivational research, self-regulation, goal setting and intrinsic motivation are also considered indicators for this construct (Fredricks et al., 2004; Anderman & Patrick, 2012, Christenson et al., 2012). Moreover, Fredricks and McColskey (2012) stated that not all types of cognition are observable in situ.

Sulis (2019) again gave an extensive overview of cognitive engagement from a Social Cognitive Theory perspective. As a construct, it is influenced by focused attention, reaction to challenges and metacognitive strategy use. Focused attention is affected by task demands, the behavioural involvement and interest in the task, task variety throughout the lesson, the timing

of a task within the lesson and in what capacity the student can work under pressure. A student's reaction to academic challenges is influenced by individually coping through cognitive strategies, asking teacher(s) or peer(s) and/or abandoning the challenge altogether. Metacognitive strategy use pertains to planning, monitoring and evaluating of a task.

This section provided an overview of past research done that tried to explain the construct of cognitive engagement from various theoretical frameworks. A multitude of indicators were given but, as stated, researchers are still not in agreement where the divide is between the cognitive and emotional components of engagement. The following section will give more insight in the affective side of the construct.

Emotional engagement

Emotional engagement refers to the affective attitudes of learners. In literature, research has either focused on engagement at the school level or at the learning activity level. As is the case with behavioural and cognitive engagement, emotional engagement is also approached from a myriad of theoretical frameworks and research contexts.

When emotional engagement is investigated from the school level, research focuses mainly on learner's feelings of belonging, identification, and relatedness (Finn & Voelkl, 1993; Voelkl, 1995; Finn & Rock, 1997; Yazzie-Mintz, 2007; Wang, Willet, & Eccles, 2011; Finn & Zimmer, 2012; Voelkl, 2012). It comprises affective attitudes towards the school, teachers and peers. Looking more closely at learning activities, positive as well as negative emotions are observed (Connell & Wellborn, 1991; Skinner & Belmont, 1993; Meyer & Turner, 2002; Appleton et al., 2008; Skinner et al., 2009; Skinner & Pitzer, 2012). Skinner, Kindermann and Furrer (2009) defined emotional engagement in the context of the class and task as motivated involvement during learning activities. Positive emotions include interest, enjoyment and enthusiasm to learning activities. At the other end of the spectrum, anxiety, frustration and boredom were found to have a negative effect on emotional engagement. These emotions compromise the affective attitudes and reactions to learning activities. In the realm of SLA research, Svalberg (2009) characterized an emotionally engaged learner as someone who approaches language learning in a positive manner. Such a learner shows an autonomous and willing attitude towards learning a language or certain features.

Due to the fact that emotional engagement is investigated from different perspectives, it also affects how it is operationalized in the literature. In the context of the school, emotional engagement has been measured in connectedness with the school, perception of belonging to the school and, in extension, perceived value of education (Finn, 1989; Eccles et al., 1983; Voelkl, 1997; Wang, Willet, & Eccles, 2011). Research with a focus on learning activity measured learners' affective attitudes in terms of interest, enjoyment and enthusiasm (Connell & Wellborn, 1991; Skinner & Belmont, 1993; Skinner et al., 2009). Moreover, group work had positive benefits for students in the language classroom, as pointed out by Early and Marshall (2008). Students were more eager to talk about their task, also outside of class time if they enjoyed the social benefits of having a common interest and purpose.

An important point to consider is that emotional engagement may precede other forms of engagement (Pekrun & Linnebrink-Garcia, 2012). According to them, emotions may entirely be responsible for activation or deactivation of other forms of engagement. This in turn may affect students' achievement via engagement (less engagement is lower achievement), but it is not necessarily true that positive emotions leads to more engaged learners and vice versa. Per example, positive emotions such as enjoyment or enthusiasm can either aid learners' cognitive engagement in being more personally invested in learning or, through accepting the task and its outcomes, hinder their metacognitive strategy use resulting in less creativity.

The relationship between emotional and other forms of engagement has also been investigated. Although acknowledging the causal relationship that emotional attitudes can have a negative or positive impact, Skinner et al. (2009) only found this causality for behavioural engagement. According to them, both components are strongly affected by their own individual domains without influencing each other, but are strongly linked by the fact that they are both shaped in the same way by outside factors. In the context of the classroom, they state that emotions are a good indicator for behaviour. Emotions such as enthusiasm and interest may aid persistence and effort, both indictors of behavioural engagement. This line of thinking is supported by Archambault, Janoz, Fallu, and Pagani (2009) and Green et al. (2012). Fredricks et al. (2004) already noted that in past research indicators of emotional engagement are often measured in the same context and within the same scale as behavioural engagement (e.g. Ryan, Stiller, & Lynch; 1994; Connell et al. 1995; Skinner, Zimmer-Gembeck & Connell 1998; Marks, 2000). This issue leads to significant overlap between the two components.

Therefore, to get a better grasp on what constitutes emotional engagement and its cut-off point, Sulis (2019) proposed after analysis of advanced L2 learners of French using Social Cognitive Theory that the construct of emotional engagement refers to positive and negative affective reactions towards learning activities. With enjoyment, interest, and accomplishment on the one hand and anxiety, disinterest and frustration on the other. Task and lesson enjoyment is influenced by task demand, the perceived task relevance, interest in topic, and classroom atmosphere. Elements of novelty, opportunities to exchange ideas, and relatedness to content material is constructive for interest in the content material. A sense of pride and accomplishment is attained through sense of improvement, a sense of reward for effort, and a sense of contribution to something relevant. Negative factors, such as boredom and disinterest, are strengthened by a lack of active involvement in the task, a lack of interest in the topic and a lack of variety throughout the lesson. Anxiety and fear of failure stem from feelings of uncertainty and low outcome expectations. Being put on the spot and negative peer comparison can also lead to these feelings. Frustration and a sense of struggle with the task is due to an overload of information to process, feeling overwhelmed by task demand and the inability to keep up.

Finally, the component of social engagement will be discussed. This type has not received the same deal as attention in past research. Mostly due to the fact that, yet again, a significant amount of overlap has been observed as a result of their mutual interdependence and same operationalization (Linnenbrink-Garcia, Rogat, & Koskey, 2011; Pekrun & Linnenbrink-Garcia, 2012). However, in the past years social engagement is seen more and more as a separate component than a subconstruct of either behavioural, cognitive or emotional engagement (Rimm-Kaufman et al., 2014; Philp & Duchesne, 2016; Wang, Fredricks, Hofkens, & Linn, 2016).

Social engagement

Social engagement is seen as the quality of social interaction while learning (Wang et al. 2016). Quality is explained through the willingness to invest in forming and maintain relationships between peers and teachers. Social engagement can also be seen as students' social exchanges with peers throughout the day that are linked to learning or instructional contexts (Rimm-Kaufman et al., 2014). Philp and Duchesne (2016) stressed the importance of a social engagement component for language learning. For second language development, social interaction in crucial. Social engagement is, therefore, essentially linked to learners' interest in initiating and maintain interaction (Svalberg, 2009). A socially engaged learner should be seen as initiative, interactive, collaborative and proactive. Sociocultural research on interaction emphasized the importance of collaboration between students when working on tasks together

(Storch, 2002). This is supported by other researchers who have proposed that students are far more likely to be effective in language learning when they are socially engaged (Moranski & Toth, 2016; Sato & Ballinger, 2012; Storch, 2008).

It is true that emotional engagement (learners' attitudes towards school, peers and teachers) contains a social aspect. Social engagement is indeed closely linked to emotional engagement, especially among child and adolescent learners where relationships are seen as a powerful social goal (Philp & Duchesne, 2008). Moreover, observable forms of cognitive and behavioural engagement, such as requesting clarification, exchanging ideas, and giving directions are also needed for social interaction. However, these types of social interaction do not necessarily affect quality of social interaction while learning (Svalberg, 2009; Finn and Zimmer, 2012; Rimm-Kaufman et al., 2014; Wang et al., 2016; Philp & Duchesne, 2016). Social engagement is therefore seen as an important contribution in determining and assessing the nature of social interactions in the classroom.

Fredricks, Filsecker and Lawson (2016) included a social component in their model of engagement after interviewing students and teachers what they saw as contributing factors to engagement. Indicators for the role of learners' exchanges in the classroom were often named, such as interacting with peers and teachers, sharing ideas, explaining ideas, asking peers or teachers for help and more generally, working with peers. High social engagement may benefit learning and vice versa. Thus, social engagement may precede cognitive engagement and overall achievement. This aspect of a social dimension for engagement is also underlined by Finn and Zimmer (2012), but they put more focus on respecting behavioural norms in a classroom context. In their view, social engagement is following classroom rules of behaviour. This can range from coming to class on time and interacting with peers and teachers in an appropriate manner to actively participating in learning activities and not disrupting work of other students.

Social engagement has been operationalized differently in the literature. Measurements such as discussing and explaining ideas with peers, building on and understanding other peers' ideas, and helping other peers have been used (Rimm-Kaufman et al., 2014; Wang et al., 2016). For second language development and task-based learning especially, social engagement has been measured in terms of how interactive, supporting or initiating learners are in interaction (Svalberg, 2009; Baralt et al., 2016). Participants' affiliation in the discourse was also employed (Lambert et al., 2017).

As stated earlier, due to the overlap between social and behavioural components of engagement, some researchers prefer to use the term social-behavioural engagement. The similarity between these constructs allow to investigate a component of engagement only partially covered by the earlier discussed forms of engagement – behavioural, cognitive and emotional. Social-behavioural engagement refers to the quality of learners' interactions during learning activities (Pekrun & Linnenbrink-Garcia, 2012). Engagement is supported by collaborative social interactions that directly facilitate learning. Linnenbrink-Garcia et al. (2011) operationalized social-behavioural engagement in terms of social loafing and quality of group interaction. Social loafing refers to learners exerting less effort to achieve a goal when they work in a group which results in more disengagement than when working alone. Quality of group interaction, in accordance with the description of Wang et al. (2016), describes the way learners might boost or hinder peers' participation when working collectively.

Sulis (2019) found that social engagement is composed out of two main components: interactiveness and supportiveness. A supportive classroom atmosphere, mutual aid in lieu of

challenges, and peer encouragement is of influence on the former. The nature of learning activities, task partners, task topics, and group dynamic affects the latter.

A dynamic approach into L2 engagement

The majority of studies described in the previous section approached the construct of engagements as separate entities. Moreover, they mainly looked at the effectiveness of types of engagement on language learning, instead of the construct itself. Researching engagement longitudinally has been done, but from a range of different frameworks and theories. Thus, a consensus on (the definition of) engagement has been slow to form. The construct has been described as "one of the most widely misused an overgeneralized constructs found in the educational, learning, instructional, and psychological sciences" (Azevedo, 2015, p. 84). A comprehensive, overarching framework is therefore desperately needed to achieve a consensual grasp on the construct of engagement. In the following section, Complex Dynamic Systems Theory (CDST) is proposed as such a framework. Previous research on the neighboring construct of motivation within a CDST framework is therefore also discussed.

Complex Dynamic Systems Theory is an approach to second language acquisition which states that language learning is a complex system of interacting factors (De Bot, Lowie & Verspoor, 2007). These factors show periods of change and stability and are affected by context-embedded variables with non-linear relationships. Such variables can be different (sub)systems (and their subsystems) of language (e.g. lexicon, phonology, syntax) in a person. On a broader scale, variables of a dynamic systems can also be people or parts within a person, such as children forming and sustaining friendships in school, teacher and student relationships in classrooms, emotions during a task, goals and tendencies. These interacting variables which influence and are influenced by each other integrate in dynamic ways and determine a person's experience and actions (Kaplan & Garner, 2017; Kaplan & Garner, 2018). The emergence of this behaviour occurs through processes that involve both positive as negative feedback loops that inform and constraint co-action of these variables. These processes are at the foundation of a dynamic system and move towards self-organization (De Bot, Lowie & Verspoor, 2007). In time, this self-organization goes from a more chaotic patterns to relatively stable ones called attractor states. Thus, students' engagement could be an example of an attractor state created through self-organization of their engagement system in similar contexts influenced by past experiences. An attractor state is not necessarily synonym with permanent stability and may still be subject to change. This dynamic stability might change if one of the variables would perturb self-organization and move to a different engagement state. Interdependent co-action among the system ensures that all subsystems change their properties in response to a change in one of the others (van Geert, 2011). For example student's behaviour may influence the behaviour of other students (as a whole or a few) during group work, but also their own behaviour where a change in emotion would influence a change in cognition and vice versa.

There are a few conceptual challenges that arise when understanding the multidimensional construct of engagement (Azevedo, 2015). These pertain to the boundaries of the construct and its components, the unit-of-analysis of the construct and its components, and the dynamic, interdependent nature of the construct and its components. In the literature, the issues surrounding the boundaries of the construct find their origin from labeling the components of engagement as subtypes (Fredricks et al., 2004). This implies that behavioural engagement and emotional engagement have an independence from each other and thus can be studied as separate entities (Shernoff et al., 2016). More qualitative theoretical research could aid in constructing models that incorporate each of these components and their functioning from each other.

Sinatra et al. (2014) note the divergence in the unit-of-analysis of engagement in different studies. They argue for clarification of these units in approaching engagement which they define as "the level at which engagement is conceptualized, observed, and measured" (p. 2). Unit-of-analysis can refer to timescale, tasks, or groups. In the timescale dimension, micro level time-scale engagement refers to momentary involvement in a task of reasonably short duration such as five minutes or an hour (Schneider et al., 2016). Macro level time-scale engagement refers to involvement that is much more prolonged such as going to school across several years (Archambault & Dupéré, 2017). Tasks can be small or large scale. Small scale tasks refers to watching a video or doing exercises from a sheet, whereas large scale tasks would refer to entire projects or classes. Although there is overlap between timescale and task measures, research has generally tried to report engagement in large tasks during a single moment of time. Moreover, students' reporting based on memories normally constitute outcomes of certain activities instead of reflections of their engagement experiences (Fogel, 2011). The different components of engagement could have different definitions based on different time scales and different tasks. Finally, the difference between groups also has a notable effect on engagement, whether school work is done alone, in duos or in larger groups (Sinatra et al., 2014).

Research on the construct engagement must take into consideration the ambiguity of its components, unit-of-analysis, and dynamic interplay of its constituents (Skinner & Pitzer, 2012; Pitzer & Skinner, 2017). This is a challenge that requires a framework that will be able to capture the integration of different variables, such as context and tasks, individuals and contexts, macro and micro timeframes, and the dynamic interdependence of constituents. A dynamic system manifests itself in nonlinear, chaotic patterns that can suddenly change. Systems generally strive to attractor states and retain this integrity though self-organization. Thus, this definition provides a comprehensive framework for explaining the construct of engagement as a complex dynamic system.

As mentioned earlier, motivation and engagement are dynamic processes subject to variability both at a short and a long-term level due to a number of interacting variables, in line with a CDST perspective. Dörnyei (2001) states that motivation is "responsible for the choice of a particular action, the effort expended on it and the persistence with it" (p.7). It is not stable and "associated with a dynamically changing and evolving mental process" (Dörnyei & Skehan, 2005, p. 617). Changes at the task level can lead to variations or periods of stability at a larger timescale with interaction of these scales (de Bot, 2015). There is gradual stabilization of motivation once an attractor state is reached which underlines the importance of initial conditions (Verspoor, 2015). Thus, motivation can change over the course of the single lesson. Earlier research looking at motivation from a CDST perspective proposed different factors influencing motivation. Motivation researched through the academic year (Nitta & Asano, 2010), a two-month period (Lasagabaster, 2017) or a four-week period (Pawlak, 2012) showed that fluctuations were due to teaching style, group cohesiveness and teacher-student relationships. Other research done at time intervals per five minutes showed a different pattern (Pawlak, 2012; Waninge, Dörnyei & de Bot, 2013; Pawlak, Mystkowska-Wiertelak & Bielak, 2014). Fluctuations were attributed to personal factors (e.g. anxiety, task-related factors, opportunities for group work, and group dynamics). These influences were also found in moment-by-moment (MacIntyre & Serroul, 2015) and pre-, main and post-task designs (Poupore, 2013). Research on engagement from a CDST perspective is severely limited. As mentioned in previous sections, Sulis (2019) provided an integrative model of engagement incorporating behavioural, cognitive, emotional and social components. This model was constructed through the use of time-scale data of 2.5 minute intervals. Students had to rank their emotional engagement and were subsequently interviewed about their idiodynamic graphs.

These interviews tapped more into the other components of engagement to achieve a comprehensive model.

Engagement research at vmbo level

Not much engagement research has been done at Dutch *voorbereidend middelbaar beroepsonderwijs* level (vmbo; pre-vocational secondary education). The following section highlights the few studies that have incorporated the construct of engagement in some way, although none from a DST perspective.

De Milliano (2013) followed 63 vmbo students with reading and writing deficiencies and mapped the aforementioned components of engagement for the subject Dutch Language & Culture and Humanities. Although she mentioned that students generally are on-task 75% of the time and understand the importance of well-developed reading and writing skills, this did not necessarily have a positive or negative influence on their achievements. They do become better in reading and writing, but not in a way you would expect from their engagement levels. De Milliano (2013) argues that educational material on this level is not challenging enough. She proposes that students and teachers should focus more on collaborative work and metacognitive skills, instead of spelling and decoding. Van Uden, Ritzen and Pieters (2016) looked at engagement from the teacher's perspective. They incorporated teachers' experiences who actively tried to foster engagement in pre-vocational and vocational students. The learning history showed that teachers emphasized positive relationships and structure in relation to student engagement. Yet, students continued to provide examples of negative relationships and mentioned a lack of structure. This indicated that teacher's repertoire can be expanded to include more engagement-related actions.

Looking more at motivational engagement (a construct closely related to behavioural engagement), Smit (2017) investigated why students' motivation in pre-vocational secondary education is lower and dropout rates are higher than in other forms of secondary education. Learning environment and motivational self-regulation were taken as two intervention points to try to increase motivation in students. In a student-centered learning environment, students reported more need-satisfaction and motivational engagement. On self-regulation, most students prefer learning, social and well-being goals above material gain, superiority and individuality. The use of motivational strategies led to more pleasure and effort in school work. This in turn led to more strategy use. She concluded that schools can support students' motivation by designing collaborative learning environments. Smit (2017) also looked at students' use of motivational strategies as a mediator between motivational beliefs and motivational engagement. Students in Dutch pre-vocational secondary education completed a self-report questionnaire on motivational strategies, motivational beliefs, and motivational engagement. Results indicated that strategy-use partly mediates the relation between value, and effort and pleasure. Competence showed a weak direct relation with effort and pleasure. No result were found for achievement.

Purpose of the study and research questions

As noted earlier, engagement is conceptualized as a multidimensional construct (Christenson et al., 2012). These components include behavioural engagement (ways of participating in activities), cognitive engagement (mental effort and employed learning strategies), emotional engagement (feelings about school, class, activities), and social engagement (cooperation) (Wang, Fredricks, Hofkens, & Linn, 2019). Although research on this multidimensional construct has done much in the past few years to advance understanding of the interdependent

nature of engagement, it is still hindered by multiple challenges (Azevedo, 2015). These mainly pertain to the conceptual boundaries of the construct and its components, the overall size of the construct and its components, and the dynamic interplay among these components.

Thus, the purposefulness of this study is mostly fueled by a few issues raised in earlier sections. First, overlap and discrepancies between the different components of the construct of engagement can be seen in previous studies. Moreover, these components were mainly investigated in isolation. Second, there is a lack of research into engagement from a Dynamic Systems Theory point of view. It has been argued that this framework can be a way to comprehensively explain the differences in the components of the construct from moment-to-moment. Finally, in the domain of second language instruction and second language teaching, not much research has been conducted in the authentic classroom context for pre-vocational secondary education. The current study tries to fill these gaps and paint a more complete picture on the multidimensional construct of engagement.

In this thesis, an integrative model of engagement will be employed and a dynamic systems theory view is used as a paradigm to conceptualize engagement as it proceeds on a moment by moment basis in a classroom setting. The current study tries to shed more light on this construct as a whole in a pre-vocational secondary education setting using Dynamic Systems Theory. This will not only aid in achieving a better understanding of engagement, but also be a step towards understanding what engages pre-vocational school students and what does not. These goals are attained through the following research questions:

1. To what extent does engagement change over the course of the L2 lesson?
2. What do students identify as sustaining or impeding their engagement during the L2 lesson?

The present study is a variation of earlier work done by Sulis (2019). Although engagement was explained from a Social Cultural Theory perspective, she incorporated a CDST perspective to explain motivation and willingness to communicate (WTC). A combination of classroom observations, a stimulated recall procedure based on a video-recording of the lesson and cued retrospective interviews will aid in answering the above research questions. It is hypothesized that in general a provision of a supportive, highly involving and interactive classroom atmosphere can contribute to sustain both short and long-term engagement. Since tasks are the interaction partners with which learners engage, they have a substantial impact on motivation at the lesson level (Skinner & Pitzer, 2012). Activities need to have a clear purpose, be interactive and connected with learners' life and interests, and be varied in nature and short in length (Sulis, 2019).

Method

The different components of engagement of 15 school students were analyzed over the span of a single English Language & Culture lesson. The current study looks at earlier proposed subcomponents and models of engagement and relates it to observations made during this lesson. Other subcomponents relevant in the context of the VMBO language classroom will be incorporated in these models.

Participants

Fifteen learners of L2 English (10 male, 5 female) from a first-year mixed class of *kaderberoepsgerichte leerweg* and *basisberoepsgerichte leerweg* vmbo students at a Dutch digital learning secondary school in the Northern Netherlands. All school students participated with consent of their parents in this study. See Table 1 for their characteristics. The classes observed were compulsory as part of the pupils' vmbo BBL and KBL degree. A small sample of participants was chosen to allow for more in-depth study of the different components of engagement.

Table 1. Participants' characteristics (all names anonymized)

Participant	**Gender**	**Age**	**VMBO level**	**Table (see figure 1)**
Bruce	Male	12	BBL	2
Tony	Male	12	BBL	2
Clint	Male	12	KBL	3
Thor	Male	12	KBL	3
Maria	Female	12	BBL	5
Wanda	Female	13	BBL	5
Natasha	Female	12	BBL LWOO	5
Phil	Male	12	KBL	6
Steve	Male	13	KBL	6
Gamora	Female	13	KBL	7
Hope	Female	13	KBL	7
Bucky	Male	12	BBL	8
Loki	Male	13	KBL	8
Peter	Male	12	KBL	9
Scott	Male	13	KBL	9

Voorbereidend mibbelbaar beroepsonderwijs (vmbo)

Vmbo (pre-vocational secondary education) is one of four school tracks in the Netherlands. It lasts four years with students ranging from age twelve to sixteen. Nationally, sixty percent of school students are enrolled in vmbo. It is characterized by the combination of vocational

training with theoretical education in languages, mathematics, history, arts, and sciences. In turn, vmbo consists of five different levels: *theoretische leerweg* (vmbo-t, theoretical programme), *gemengde leerweg* (GL, combined programme), *kaderberoepsgerichte leerweg* (KBL, middle-management vocational programme), and *basisberoepsgerichte leerweg* (BBL, basic vocational programme). Each level offers a different balance between practical vocational training and theoretical education and prepares for different levels of middle management and/or vocational training in *middelbaar beroepsonderwijs* (MBO, middle-level applied education). Each level also offers a *leerweg ondersteunend onderwijs* (LWOO, learning path supporting education) intended for pupils with more severe, but isolated educational or behavioural problems. Digital learning schools make use of technology to accompany learning. In general, instructional practice is supported by technological devices and applications, such as laptops and smartboards. During the lesson at the aforementioned school, a type of blended learning was employed with a combination of online education materials (e.g. exercises, news clips) and traditional classroom methods (e.g. classroom reflection, hand-outs, assignments on paper).

The classroom context

The classroom was arranged in such a way to promote socializing and cooperation between students and teacher. At each table there were 2 or 3 students seated. The teacher stood in the front middle of the classroom at a smaller standing table. A teaching assistant (TA) was also present during the lesson. For a setup of the classroom, see figure 1. A new seating arrangement was introduced during the week when the video recording and interviews took place.

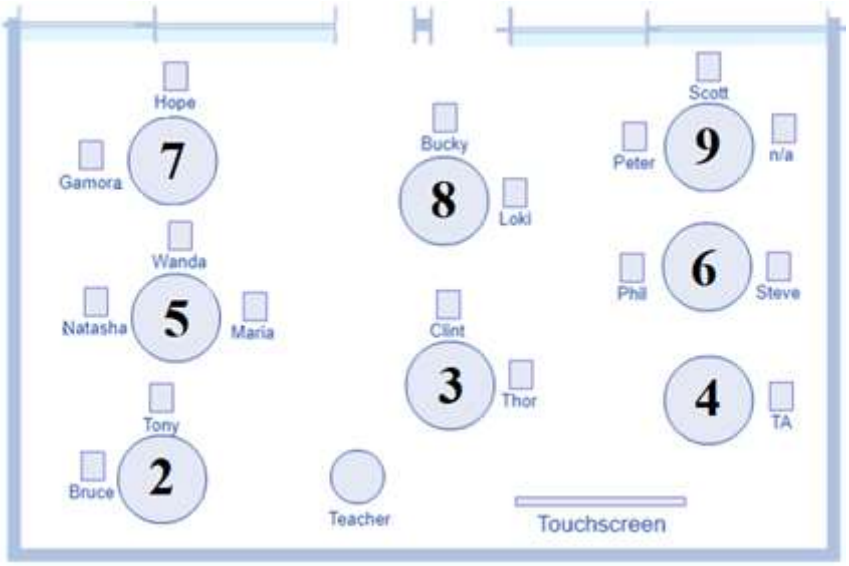


Figure 1. Classroom setup of the class

The teacher, an L2 speaker of English with more than 10 years of teaching experience in secondary education, taught one lesson comprising a grammar task, a fill in the gaps and grammar task menu card exercise, and an elicitation activity (see Table 2). During each task there was opportunity for output where the teacher also encouraged pupils to ask questions about the material and assignments. The lesson had a duration of 50 minutes. During the majority of the lesson Dutch was spoken almost exclusively apart from activity related language (words, sentences and grammar related to the exercises) and a few fixed collocations from the teacher (e.g. *alright, let's move on, do you understand?*). The main focus of the lesson was on language skills, especially on the correct use of do/does when producing questions. The

activities were carried out either alone, in groups, or classically. 8 minutes of the lesson was not recorded due to setting up the video and audio recording equipment. This part of the lesson was not taken into account during the stimulated charting phase.

Table 2. Lesson outline (main activities are in *cursive*)

	Activity	**Duration**	**Time on chart (roughly)**
	Students entered the classroom while researchers set up video and audio recording equipment. One of the researchers shortly explains that the lesson will be recorded and will be watched back during the next lesson. They are reminded that they have not to do anything special during the lesson.	8 minutes	n.a.
	Teacher gives grades back from last week's test.	3 minutes	2,5
	Teacher introduces a grammar task – creating questions with do/does. The students are presented with an explanation and fill in the gap sentences on the smartboard. The teacher asks students what stands out and explains when to use do/does. The students have to copy the grammar scheme and example sentences and fill in the latter. They also have to come up with two original sentences using do/does.	3 minutes	5
Activity 1	*Students work on grammar task (alone or together)*. Teacher walks around and answers possible questions.	6 minutes	7,5 - 10
	Teacher wants to hear some examples from students. Afterwards, he repeats the explanation when to use do/does. He reminds the students to keep the assignment in their notebook for an upcoming test.	3 minutes	12,5
	Teacher introduces a menu card with accompanying matching, fill in the gap, and do/does exercises. Students are given 10 minutes to do the exercises on their own. The fill in the gap exercise will be checked afterwards, the other exercises during the next lesson.	3 minutes	15
Activity 2	*Students work on menu card exercises (alone)*. Teacher walks around and answers possible questions.	12 minutes	17,5 - 30
	Teacher checks the fill in the gaps exercise. He tells students that they had to use the menu to come up with the correct combinations. He asks a few students what they have written down.	4 minutes	32,5
	Teacher introduces a BBC news video. He points out that certain animals will be discussed in one segment. He asks students to think of do/does questions related to animals.	1 minute	35
	Students watch BBC news video discussing skateboarding at the 2020 Olympics, 5 animals that make us smarter, and an interview with two actors from 'Gus and Cooper'	4 minutes	37,5
Activity 3	*Teacher asks a few students if they can come up with do/does questions related to animals.*	2 minutes	40
	Teacher concludes the lesson and reminds students to finish the grammar and menu card exercise for next lesson.	1 minute	42,5

Materials and procedures

Classroom observations and video-audio recording

One lesson of one first-year vmbo KBL/BBL English class was audio- and video-recorded. During this lesson two researchers made handwritten notes of the classroom activities, interactions between students and their teacher and their behaviour overall. Before observations took place, the parents of the school students and the teacher signed for informed consent to be included in the current study.

Stimulated charting of the construct of engagement

The Idiodynamic Method (MacIntyre & Legatto, 2011) was employed to stimulate charting of the construct of engagement. This method is a moment-by-moment rating based on video-replay of a task and/or lessons. The component of emotional engagement was visualized and tracked over the course of the lesson using a chart developed by Sulis (2019). In turn, this chart was based on the 'Motometer' (Waninge et al., 2014) and a motivation grid (Pawlak, 2012). The 'Motometer' is an online rating based on a chart which requires double focus on the class, as well as rating. Directly following the class and while watching the recording of the lesson, each student was tasked to visualize their fluctuations in their engagement by rating their emotional engagement on a scale from 0 to 10 every 2.5 minutes. It was explained that the scale represented their answer to the question: how much did you like this part of the lesson? With 0 corresponding to *I did not like this part at all*, 5 corresponding to *I liked this part*, and 10 to *I liked this part very much*. Emotional engagement was chosen for the stimulated charting as it is proposed that this component precedes other forms of engagement (Pekrun & Linnebrink-Garcia, 2012). In this way, this procedure secured that the different components would be observed from isolation and allowed that the charts could be used as a tool for more in-depth investigation during the interviews. Before each charting moment, the video was played 30 seconds before (for example, at the 10 minute mark, the video was started at 9.30 minutes). This allowed students to recognize the context of that part of the lesson. The first researcher told the students where they had to fill in their rating on the chart at each interval to ensure correct registration.

Interviews

Two days after the charting procedure, all students took part in individual semi-structured interviews conducted by the first researcher. During this interview, they were asked questions related to the English class, lesson, and their self-reported changes in the chart. The answers could then be related to one of the components of engagement.

In summary, data was collected in three steps using the following methods. First, classroom observations of one English lesson took place using video- and audio-recording. Second, the video recording of the lesson was shown to students where they had to fill in an engagement chart at 2.5 min intervals. Third, interviews were administered with students to analyze their chart and other aspects of the English class(room).

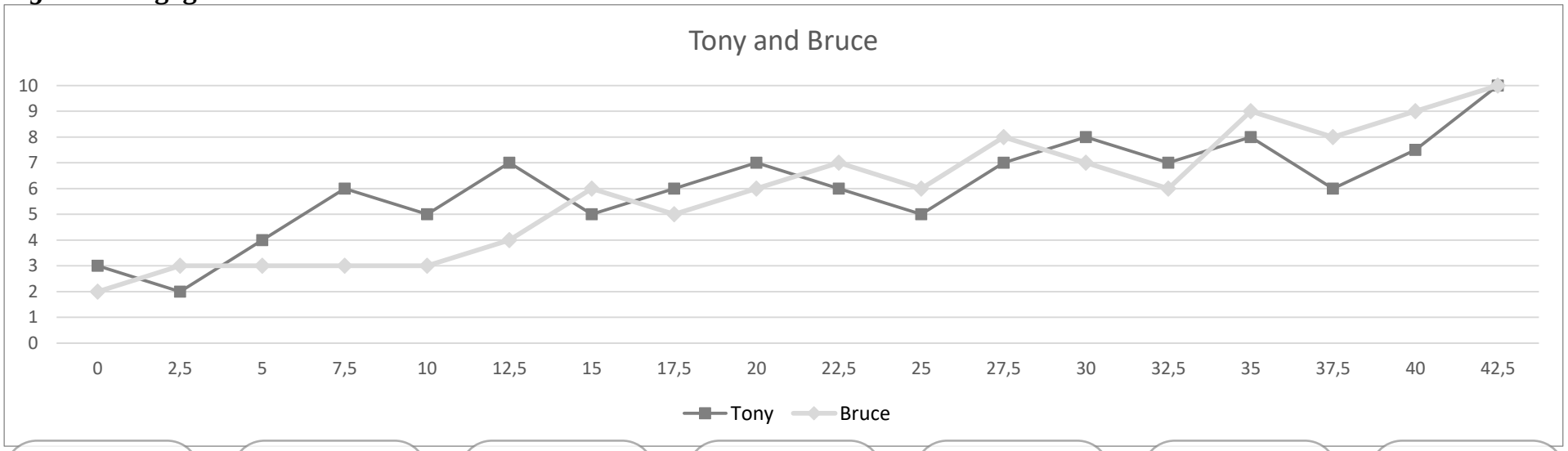
Coding and analysis

This study combines both a data-driven as well as a theoretic approach for qualitative analysis. A data-driven approach was chosen for the students' self-reported charts and information. Since this was not approached from a certain theoretical framework, new nomenclature was needed to code the data. In contrast, the theoretic approach was employed to name specific factors that have been outlined in previous engagement literature, especially Sulis (2019). A logbook of the lesson contained the hand-written classroom observations of both researchers and observations from the audio- and video-recording. The engagement charts of the students were recreated using Excel. This allowed to combine the charts of students sitting with or near each other and visualize possible similarities or discrepancies more easily. The individual semi-structured interviews were analyzed thematically. This way data coding could be done from an inductive bottom-up approach, as well as a deductive top-down approach (Braun & Clarke, 2006). Moreover, this also made sure that the analysis was not grounded in certain epistemological perspectives and thus can be applied to a wide variety of theoretical frameworks (Braun & Clarke, 2006). The interview data was coded using Atlas.ti employing earlier sets discovered by Sulis (2019). In turn, these codes were grouped together to create overarching themes. A triangulation of the data sources (video- and audio recordings, engagement charts, and interviews) was used to establish connections between these overarching themes and their (inter)relationship to behavioural, cognitive, emotional, and social engagement.

Results

In this section, the engagement charts from all students are presented. Each chart includes the students sitting at the same table in the classroom during the English lesson. Figures 3 up to and including 9 show charts with the level of students' emotional engagement plotted at 2.5-minute intervals with notable excerpts from the interviews referencing specific moments of the lesson. All excerpts have been translated from Dutch to English. Students and their charts are grouped together to outline specific facets of the different components of engagement. If other students display the same facets, it is also mentioned. Maria (figure 5, table 5) has no audio recording from the interview due to faulty equipment discovered after the interview already had taken place. Her engagement will be described only through data gathered from the video-/audio-recording of the lesson and handwritten classroom observations.

Figure 3. **Engagement chart of table 2**



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T: I don't go to English reluctantly, but I need some time to start up. Some days I find it more fun than other days. It all depends on what we are going to do.

2,5

T: At the beginning of the lesson, I paid more attention to what the teacher was saying, because I was interested in what we we were going to do that lesson. I listened carefully and enjoyed it.

B: I never like the beginning of the lesson very much. The teacher should explain less or give shorter explanations, so we can just start.

10

T: When a teacher keeps on explaining an assignment, I quickly lose my attention. I thnk: whatever, I don't care. Let me just get on with it!

B: If the teacher finally stops explaining and we can start with the assignment. I like that much better.

20

T: I find assignments where you have to work alone less fun. You have to only learn for yourself. I prefer to work together

B: Before that there was mostly only explanation and I don't like that very much. When it is time you can do something yourself, I enjoy the assignment much more. Also, I get to finish my homework much quicker.

32,5

T: I like watching those news clips, because then I don't have to do anything myself.

B: I liked the BBC news video the most. I like learning information about other countries. Some videos are harder to follow, but I get the general idea.

35

T: Sometimes I don't really understand what they are saying in the video, so I lose interest.

42,5

T: Lunch break was coming up and that's better than any class.

B: We had lunch break after this class, so I was looking forward to that.

Behavioural engagement

Initiative-taking

Confidence

It is noted that confidence played a role in initiative-taking for a few students, albeit with different origins and outcomes. **Bruce** said that he does not have to work hard during the lesson, because of his relatively high English proficiency. As a result he grasps the overall angle of the assignments (and their explanation) fairly quickly and speeds through them. **Thor** showed a similar pattern. He was confident in his proficiency for the assignments and therefore enjoyed them much more. During the whole lesson, he was on-task. **Gamora** and **Peter** also were confident about their proficiency, but this did not result in more initiative-taking from both. For **Gamora**, the crux was predominantly that she did like to participate and work hard, but that it was not always needed for each activity. In those cases, she preferred to do the work at home. **Peter** thought the assignments were too easy for his level and in turn rather talked with his classmates.

Classroom dynamics

For some students the classroom dynamics played a part in their initiative-taking. **Bruce** in particular suffered from the constant noisy atmosphere in the classroom. As a consequence he found it harder to keep focused all the time. **Phil** underlined this sentiment. He noted that during the explanation of the menu card assignment a lot of students were already making a lot of noise. He found it harder to start with the exercise and could not ease into it as easily. Although **Gamora** did not mind the noise, she did say she liked silence and calm better when working on exercises on her own. **Clint** also characterized the class as noisy, but this did not influence whether he partook more actively or passively.

Cognitive engagement

Focused attention

Behavioural involvement

A number of students noted that their behavioural involvement was partially affected by fatigue and/or cognitive load. Although **Bruce** noted that he himself put the same amount of and showed effort in each part of the lesson, he also said that he did note this was very different from student to student. According to him, if certain students don't understand something, they give up quickly and start disrupting the class. **Tony** showed concentrated attention at the beginning, but quickly lost focus when he thought the explanation too long. He told that he only was concentrated, because he needed to know what to do. If he got the general idea and the explanation kept going on, he would show disengagement. He could not give a suggestion what would keep him more behaviourally involved. **Steve** showed and noted himself that he showed the least involvement during the video at the end of the lesson. Although he enjoys the material, he was a bit tired, which lead to him being less attentive. **Wanda** has difficulties with sitting still for longer amounts of time. She elaborated on this behaviour that she always has to move. As a result, she sometimes cannot focus during certain parts of the lesson, but this is not affected by specific parts, subject matter or assignments.

Variety throughout the lesson

Although the assignments were different, they all revolved around the correct usage of do/does in question sentences. **Bruce** commented that the explanation did not aid in improving his

attention span and shorter explanations could help in improving the productivity of the students. He also likes to get started as soon as possible, so he does not have any homework. **Steve** liked the different assignments during the lesson and commented that you can practice more that way. **Gamora** said she can be quickly distracted, but not necessarily by a particular thing. Variety throughout the lesson was not of effect on her attention span.

Emotional engagement

Activity/lesson enjoyment

Perceived relevance

The degree of relevance of the activities for appliance in the real world was deemed by students as playing an important role in their enjoyment. Both **Tony** and **Clint** saw the relevance in learning English for their future jobs. **Tony** wants to become a truck driver, while **Clint** wants to become an architect and travel all over the world to build and design houses. Both reasons that you need to know English to make yourself understood abroad. **Clint** also enjoyed the menu card exercise, because he could relate it to real-life situations where he went to restaurants in Germany with his parents and had to translate for his father. **Scott** had a similar experience where he had to talk English with an exchange student from the Czech Republic. He noted that he sometimes had difficulties communicating and wanted to improve his English in school. **Phil** and **Thor** also emphasized the importance of knowing the English language when abroad, but did not enjoy the class more for that reason. Both said they enjoyed learning another language, but rather speak Dutch.

Anxiety and fear of failure

Feeling of uncertainty

Looking back at the beginning of the year, **Tony** had a lot of anxiety. Since he did not have English classes in primary school (whereas all other students did), he was insecure if he could learn it well enough. During the lesson, he actively participated and also said himself that he does speak more English, but he still finds it difficult.

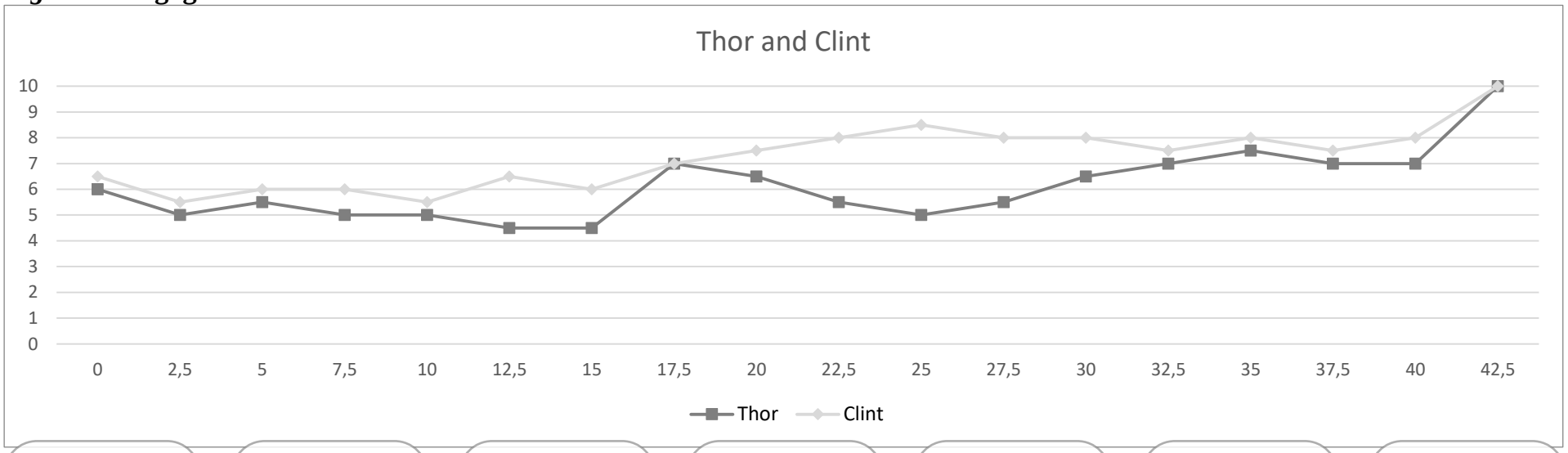
Social engagement

Supportiveness

Supportive classroom atmosphere

All students acknowledged that the overall atmosphere of the classroom was loud. This was experienced as disruptive or noninfluential. **Bruce**, **Tony**, **Gamora**, and **Hope** all found it to have a negative effect on their concentration and engagement in the activities. **Bruce** told that he could work more easily, because he was seated with someone he was not fond of. In contrast, **Hope** enjoyed the company of **Gamora**, because she could ask for help. **Gamora** preffered finishing work at home, because she could then work in silence. **Thor**, **Clint**, and **Natasha** were not affected by the noisy atmosphere. All three could pay attention and work on their assignment undisturbed.

Figure 4. **Engagement chart of table 3**



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T: I like and don't like English at the same time. I like it a bit. It is not a language I would speak, but I do like speaking other languages

C: At the start of each English lesson I always have to activate myself, especially after the weekend or vacations. Then I think: how does that work again? I do enjoy the class, because I want to become an architect. you need to speak English well.

10

T: I was already done with my assignment, so I had to wait a long time. I don't like waiting. I just want to continue

C: Normally I don't like the beginning of the lesson. Lots of explanation. But if everyone is on a roll, I enjoy it much more and I also understand it better. I need to ease into it.

15

T: I don't mind listening to the teacher explaining stuff. I understand the assignment better that way.

17,5

C: I liked the menu card assingment, because sometimes I go to a restaurant in Germany with my parents. They talk German or English, but my dad doesn't understand that too well, so he asks if I can order. I liked it, because I can use it in daily life.

25

T: I can't really explain why I liked the menu card assignment more and more. I just like working by myself and not with others.

C: I am always motivated to finish my assignments during the lesson. I am more concentrated then, because I want to have free time at home and not any homework. It is a bit stressful if it seems I can't finish it.

35

T: I don't know, I like seeing stuff about other countries I think.

C: I enjoy the news clips, but I like watching movies more. I have to adjust a bit each time when watching short clips.

One clip was about animals. I liked that very much. At home I have a dog, three geckos and a bearded dragon.

42,5

T: After a few classes, I am happy that there is a lunch break.

C: At the end of each class, I think of what I will be doing next. Another class or break. It is also a small relaxing moment for me.

Behavioural engagement

Class participation

Value of participation for achievement

Both **Thor** and **Clint** were actively involved during each part of the lesson. In the interviews, they also told they saw the value in learning another language. **Thor** was grounded in the lesson himself. He liked to listen to the teacher in case he would say something relating to the exercise. **Thor** did not want to miss anything important. **Clint** was more practical, explaining his drive to finish his work in class because he wants to have free time when he is at home.

Persistence to challenges

Value of persistence for learning

Clint understood the benefits of staying engaged so you can pick up more language skills. Not only detrimental for his dreams of becoming an architect, but also because he uses English when playing online video games. All the other boys emphasized this. **Thor**, **Thony**, and **Scott** also showed perseverance during the lesson. They all thought English was an important language to learn, but moreover that actively participating even when challenged could help you achieve a higher proficiency. **Thor** rather figures it out for himself, whereas **Scott** benefits from pre- or post-explanation of exercises.

Cognitive engagement

Focused attention

Activity demands

There was a division between students having to work hard for the different activities and students who could take a more relaxed approach. **Clint**, **Thor**, **Wanda**, **Steve**, and **Gamora** all had no problem with the level of the exercises. **Clint** did have to activate himself for each activity/lesson and had to work hard, but he would not mind being challenged more. All could easily follow the BBC news clip, except **Thor** did not understand everything. That did not distract him. **Wanda** (engaged) and **Gamora** (disengaged) elaborated that grammar or lexical tasks were also no problem for them. **Steve** liked when something new was introduced during the lesson, but after a short while he was bored again, because there was no challenge for him. **Tony**, **Natasha**, and **Phil** had more difficulties during the lesson, where **Phil** was more easily thrown off because of the demands.

Emotional engagement

Activity/lesson enjoyment

Classroom atmosphere

All students had a positive view on the overall classroom atmosphere (fun, albeit noisy), but it did have a negative effect on lesson enjoyment and their engagement. **Clint** was mostly affected in the beginning, but could work more concentrated later on. **Steve** had the same issue, where he himself did not partake in class discussion, but was disrupted by it. **Natasha** and **Wanda** were critical of the class during teacher explanation. Not only do they have to sit still and listen, they also cannot hear everything due to the noise.

Sense of pride and accomplishment

Sense of contribution to something relevant

Although students do understand the importance of learning English, they are not always convinced by the relevance of certain exercises. **Thor** and **Natasha** only uses the English language at school. **Steve** and **Bucky** do see learning as a stepping stone for their later careers. The former wanting to open up a restaurant, the latter wants to start his own YouTube channel. Its relevance mainly pertaining to self-improvement.

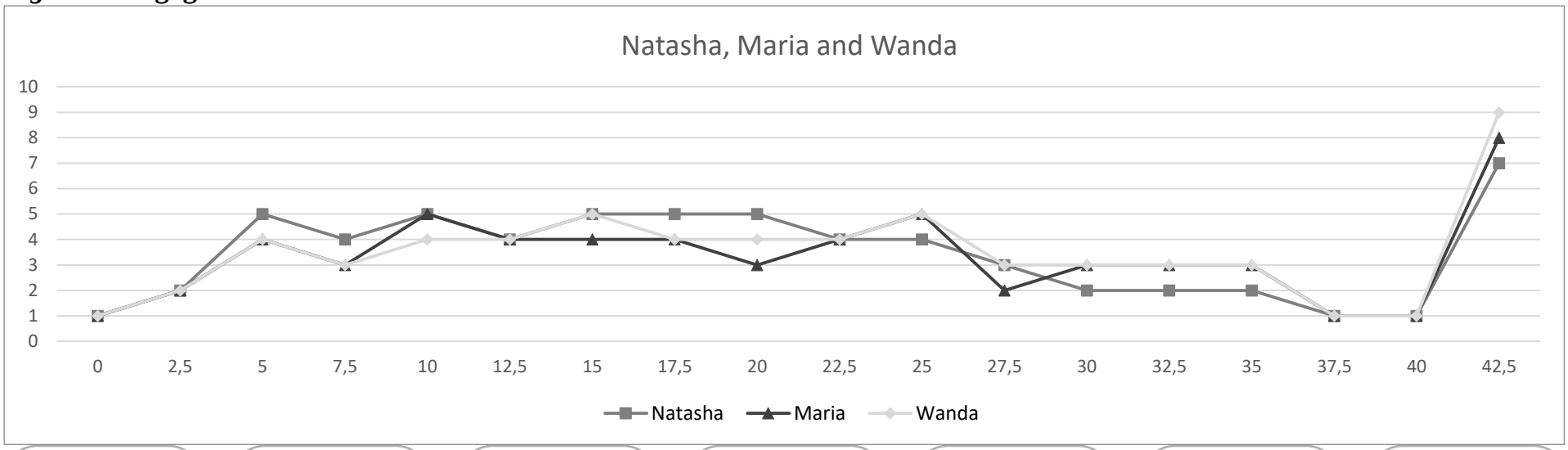
Social engagement

Interactiveness

Group dynamics

In this class the girls and boys do not interact much with each other during the lesson. The girls are more quiet, but do have more têtê-à-têtês, whereas the boys are more vocal. **Clint** and **Peter** both found it unfair that the girls get punished less for their disengaged behaviour. **Wanda** and **Natasha** acknowledge that the boys tease sometimes, but it is mostly innocent and overall dynamics are friendly. **Scott**, **Loki**, **Bucky**, and **Phil** share that sentiment. Although **Phil** and **Bruce** do acknowledge that other loud students distract them, they blame themselves for reacting to it.

Figure 5. **Engagement chart of table 5**



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N: At the beginning of the lesson I am not really concentrated.

W: Our class just talk a lot, I find that annoying. It's so noisy and I like quietness more.

5

N: I like doing things instead of listening.

W: I like English. I am good at it, unlike Dutch. I don't like doing things that I am not good at.

10

N: I usually don't like the explaining parts. You have to sit still for such a long time.

W: I am pretty active and can't really sit still. So I like when we can start for ourselves.

15

N: I liked the menu card assignment the best.

W: exercises such as word search I like to do alone, I don't want anyone to copy my answers.

25

N: When I am doing something for too long I get distracted and just want to talk with my friends. About the assignment or other things.

W: I liked the menu card exercise. It's like a game, like word search. I like working on my own. I usually don't ask questions, so nobody bothers you when you try to learn.

27,5

W: I had to explain to another girl what she had to do. I don't mind explaining stuff to my friends. Sometimes I like to work alone, sometimes with my friends.

35

N: I don't like the clips at all. You have to sit still and only have to listen. I understand the message, but not everything.

W: I don't really pay attention to the news clips, because they talk way too posh English. Usually I am just talking with my friends. I can understand it easily, but it just doesn't interest me. I like learning from the book more.

M: I don't really follow what they are saying in the video. It goes too fast for me.

Behavioural engagement

Class participation

Teacher and peer influence

All students were fond of the teacher, although they agreed the explanation beforehand should be shorter to keep it more engaging. **Wanda** liked the menu card exercise, since she could work on her own without interference. **Gamora** could also work better on her own. **Steve** and **Scott** benefitted from discussing the exercises afterwards. Although both showed disengaged behaviour when it took too long for the teacher to answer their question.

Activity types and features

Natasha, **Maria**, and **Wanda** did not enjoy the news clip at the end. Mainly because they had to sit still and listen for a longer period of time. **Wanda** also did not like the subject matter, while **Natasha** and **Maria** had difficulties understanding the level of English. This resulted in disengaged behaviour.

Effort expenditure

Activity enjoyment

Effort expenditure was mostly not prompted by activity enjoyment, but more interest in the topic (see emotional engagement – activity/lesson enjoyment). **Natasha** liked the menu card exercise the most, which triggered more effort being put into it. **Tony** added that he enjoyed and put more effort into group exercises, instead of working alone.

Emotional engagement

Activity/lesson enjoyment

Topic interest

Topic interest was a major factor for overall lesson enjoyment. A majority of the students were most interested in the menu card exercise. **Wanda** compared it to a word search puzzle which she enjoyed doing in her free time. **Phil** enjoyed it, because for him it was like time flew by. **Gamora** and **Thor** could relate it to real world situations. **Thor**, **Clint**, and **Bucky** were most engaged during the BBC news clip. With **Thor** liking it because of the information about other countries, **Clint** because of the item about animals, and **Bucky** because he enjoyed learning about a range of different subjects.

Interest in content material

Opportunities to exchange ideas

During the grammar and menu card exercises, **Wanda** worked together with **Natasha** and **Maria** to exchange ideas and possible answers. She later told this was due to their common interest. Different behaviour was observed during the news clip. Although communicating with each other, this was actually fed by their common disinterest. **Peter** and **Phil** also liked it more when they could work together.

Relatedness to content material

Wanda did not like the ‘posh’ English British people used in the clips comparing it to a Dutch dialect called Gooi. **Clint** has a dog, three geckos and a bearded dragon at home. That way he was more interested in the clip featuring different kind of animals at the end of the lesson.

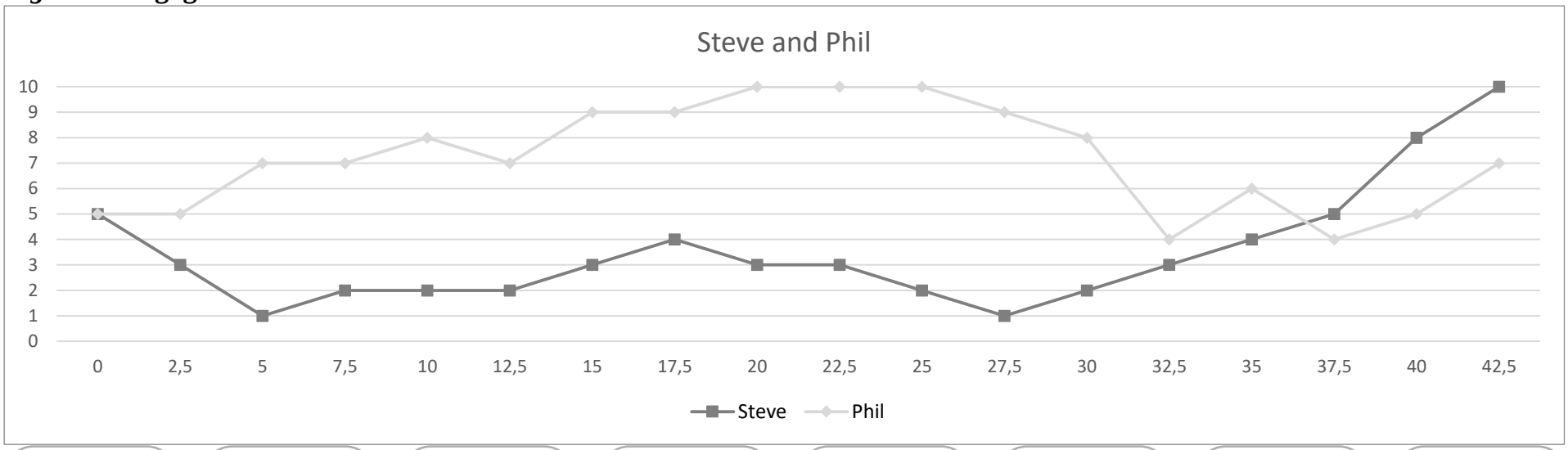
Social engagement

Supportiveness

Peer encouragement

Peer encouragement played a role in student's engagement, either positively and negatively. **Wanda** had to explain a few things to **Natasha** during the menu card exercise which she did not mind. **Hope** found the same aid with **Gamora**, also noting that the teacher is too busy helping other students sometimes. Although **Thor** generally does not ask many questions, he can rely on his classmates when he finds something difficult (like clock times in English). He himself does not associate too much with the deficiencies of other students. **Tony** and **Phil** stated that each student is willing to help others, although the girls and boys are not always on the same wavelength. **Scott** noted that even when he is concentrated and fixated on his work, others may not be and will distract him. Group work can also be a problem, where some are participating, while others are not (disinterest or high demands), which results in the former also being demotivated. **Bruce** added that although he gets quickly distracted by the noise, he currently does more school work, because he is sitting with someone he dislikes (**Tony**) – a form of unconscious peer encouragement.

Figure 6. **Engagement chart of table 6**



0	5	12,5	17,5	27,5	32,5	35	40
S: In general, I like English class. It depends on what we are going to do. **P:** I like English, I liked the whole lesson. School is school, but English is okay.	**S:** Because I found the exercises too easy, I was bored during the explanation. I want to do something more difficult. I missed the challenge. **P:** I like doing exercises like do/does, because I get the feeling I learn something from it. That's important.	**S:** When the answers are given, I am more interested, because I want to find out if I did them correctly **P:** When the teacher is discussing the exercise, I get distracted and bored faster. But I also get distracted easily by other students.	**S:** If something new is introduced, I like it a bit more. I can do something again. But I found the exercise too easy, so I was less interested again.	**S:** The menu card exercise was discussed, so I could check if my answers were correct. That is fun. **P:** I like that menu card exercise very much, it seems that time always flies during those times.	**P:** I don't like listening and sitting still, so that is a bit boring. I want to do stuff on my own.	**S:** I like the clips. They speak English and sometimes I don't understand everything, so I ask for clarification. **P:** We had to make questions, so I was more active.	**S:** We had to think of questions, so you have to be more active while watching the video. **P:** The news video was about animals. I liked the facts.

Behavioural engagement

Initiative-taking

Interest

Steve and **Scott** noted that they were more interested during discussion of the exercises. Both explaining that you could check if you were on the right track. They also showed more initiative in answering questions during these parts. **Bruce** wants to achieve a higher proficiency and this manifests in him speaking more English during the lesson.

Cognitive engagement

Reaction to academic challenges

Asking peers/teacher

There is a division between students wanting to figure things out for themselves and some resorting quicker to asking someone else. **Phil** and **Steve** do not need a lot of aid, if so, they first try to help each other and only ask the teacher when they have to finish something during the lesson. **Natasha** and **Gamora** rely on their friends first, before asking the teacher. **Loki** rather gets help from the teacher. He believes the teacher can help him better and faster than other students. **Scott** shares the same sentiment, although he just quits the challenge if he still does not understand it afterwards.

Metacognitive strategy use

Planning

During the lesson and from the interviews, not a lot of metacognitive strategy use was observed. Although some students did explain how to overcome difficulties. **Wanda** has difficulties with spelling, so knows she has to practice more beforehand to get it right. **Gamora** likes to do most of her work at home, so she can work peacefully without surrounding noise. She takes into account how much she needs to do.

Monitoring

Although all students knew what their deficiencies were (spelling, lexicon, grammar), most of them only evaluated instead of monitored their progress looking at their grades. Simply reasoning a high(er) grade means you have mastered a certain aspect. **Steve** knew he had problems with disconnecting himself from the noise, so he trained himself at home to do school work with loud music playing. This helped him in at school to stay concentrated in noisy environments. **Scott** has sometimes problems with choosing the right inflection, but also noted he does not have these problems while speaking. Whenever he thinks too much about it, it goes wrong. As a result, he tries to rely on his gut feeling.

Evaluating

The *monitoring* cases shown above also display an evaluation aspect. **Phil** stated that his test grades are lower, because it is only based on his writing skills. He considers his written English worse than his spoken English.

Emotional engagement

Boredom and disinterest

Lack of variety throughout the lesson

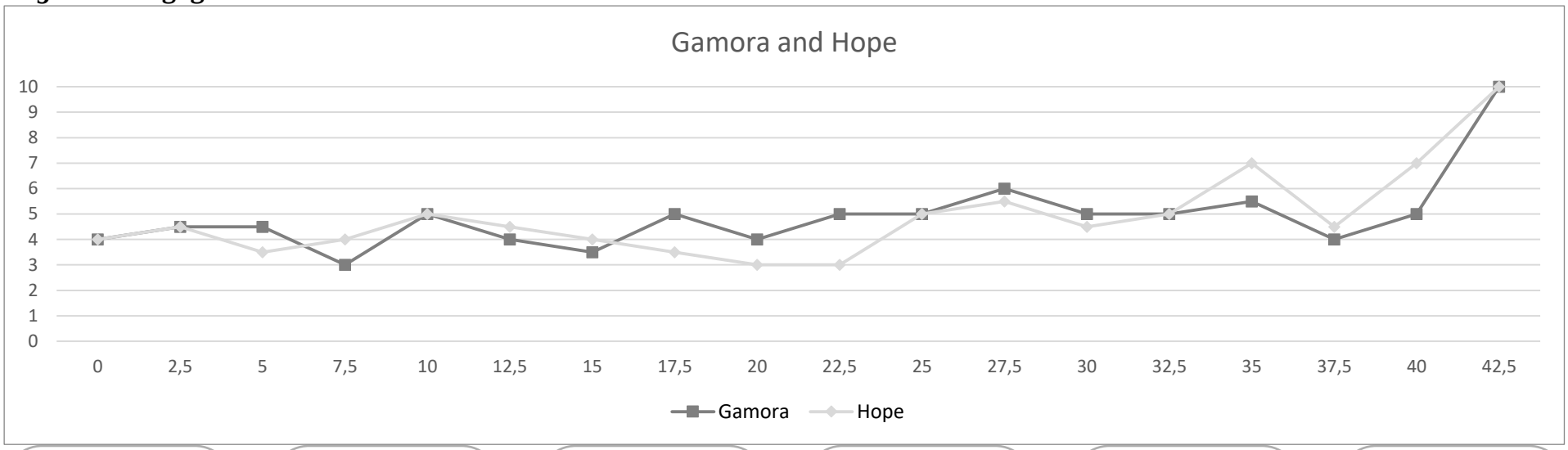
Steve acknowledges the lack of variety, especially the lack in difficulty, during the lesson. Sometimes he does get more difficult assignments, but only at the end. **Natasha**, **Wanda**, and **Maria** dislike the news clips at the ending, because they always have to sit still and be quiet.

Sense of pride and accomplishment

Sense of reward for effort

Phil had difficulties reading clock times in English. He actively sought out help with his classmates and teacher which resulted in him comprehending that concept. He felt he achieved something useful. **Thor** and **Clint** do not use English outside of the class, so do not get the sense they get rewarded for effort per se. Although this does not deter them from being engaged. **Wanda** does not like to do something she cannot do perfectly. For English, she gets good grades and understands most things, thus she enjoys it much more because of this positive feedback.

Figure 7. **Engagement chart of table 7**



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G: I like English more than other subjects, because I understand it quicker and better.

H: Sometimes I enjoy it, when I want to learn new things. But other times not really, when I am a bit grumpy. I was a bit absent-minded this lesson.
I was bit tired.

7,5

G: It gets boring fast when the teacher is explaining stuff.

H: I don't mind longer explanations. That way I can understand the exercises or other stuff better.

10

G: I like it when I can do something for myself, but after a while I get bored if it's too easy.

H: When I get stuck I try to ask Gamora first and then the teacher. We didn't know the answer, so we were both stuck.

15

G: I am easily distracted, so it's not because of the teacher talking, but it's more that I need to do something actively by myself.
I like working on my own with the book.

H: Gamora and I had a question, but we were ignored completely by the teacher.

22,5

G: I liked the menu card exercise where you had to fill in all the words and had to write down what everything was.

H: The menu card exercise was difficult for me. I liked that we could just work for ourselves.

37,5

G: I can understand English better when I am listening instead of speaking and writing.

H: I don't understand anything from the video, but I do enjoy it. I listen to it and I think: how can you understand that? So I do want to understand what they are saying.

Behavioural engagement

Persistence to challenges

Activity difficulty

Gamora usually does not have a problem with the level and keeps also focused when an assignment is more difficult. **Clint** added that he sometimes wants more challenge, reasoning that the low difficulty actually keeps him bored and disengaged. **Tony** and **Natasha** do acknowledge that they have to work hard with the former getting distracted more easily.

Learning on peers

While the majority of students do engage with their peers to tackle assignments, it is mostly in balance, instead of one reaping the benefits while the other does all the work.

Cognitive engagement

Reaction to academic challenges

Coping individually through cognitive strategies

The same pattern as using metacognitive strategies applies for most students. When **Gamora** encounters difficulties she first tackles the problem looking at past lessons in her book to see if she can apply earlier material on the same problem. When studying for a word test, **Bruce** likes to look up words in stories and learn them through context. He also puts a sheet with the Dutch translation of the text next to it for guidance. **Scott** and **Hope**, both having dyslexia, have difficulties answering questions about larger texts. They both have remedial teaching to help them cope better with their deficiencies, including large print and more assigned time. Although this still does cause problems in a normal 50 minute lesson. When they cannot get help from others, they quit the challenge.

Emotional engagement

Interest in content material

Elements of novelty

When asked about their overall attitude towards English, all students liked it more than at the start of the year. This was mostly due to seeing their own progression. **Hope** said she still has difficulties understanding spoken English. Watching the news clip, she says to herself: “I want to comprehend that. How can I do that?”. **Natasha**, **Phil** and **Clint** do not necessarily think they have become better, but overall they still enjoy it.

Anxiety and fear of failure

Negative peer comparison

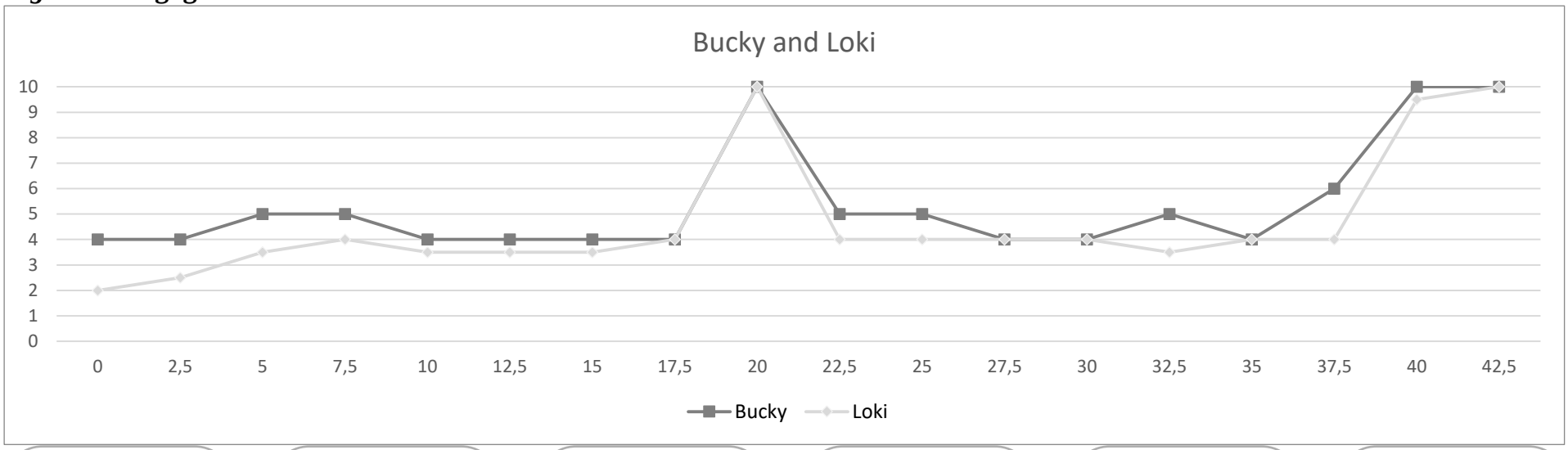
Hope claimed that the BBL get more attention from the teacher than KBL students. She remembered multiple occasions where the teacher acknowledges the BBL students faster even when BBL students had raised their hands faster. This way she could not progress with her school work. Other students did acknowledge that they consider themselves worse at English than other students, but this did not fuel their negative peer comparison.

Frustration and sense of struggle

Too much information to process

Hope and **Scott** sometimes struggle due to their dyslexia. Although Scott does not have a problem with the overall level, he can have difficulties with reading larger texts. **Hope** said her dyslexia prevents her from learning the language well. In turn, this leads to an overload.

Figure 8. **Engagement chart of table 8**



0	7,5	17,5	20	30	35
B: I do like English class. I want to become better at speaking, so I can use it when I am abroad. **L:** I want to open a YouTube channel. I have no idea what it will be about, but it has to be in English to get more followers. That's why I want to learn English.	**B: T**he do/does assignment was okay. It was not too difficult. I was mainly talking to Loki the whole lesson. **L:** In general I like all things during an English lesson. Doesn't really matter what the assignment is. Only thing I don't like very much is the teacher explaning stuff.	**B:** I didn't really like the menu card exercise, because I thought it was too easy. **L:** I do get distracted a lot, because our class is very noisy all the time.	Author's note: both students told that they wrote down a 10 because both of them made a funny face on the video still.	**B:** I don't really pay attention to the teacher explaining stuff. The assignments are pretty easy, so I know I don't have much incorrect answers.	**B:** The news clips are also okay. It depends what they are talking about. I can understand everything, but not everything interests me. **L:** I like watching the news, different kinds of subjects. I can understand most things.

Behavioural engagement

Effort expenditure

Task type

Bucky noted that he would put in more effort if the exercises were more hands-on. He likes to be more physically active like assignments where you have to work with your hands. **Hope** liked it more when she could just work for herself instead of listening. Although **Wanda**, **Maria**, and **Natasha** did not like the news clip because they had to sit still. **Wanda** in particular has to keep herself busy all the time, otherwise she gets distracted. Other students, like **Bruce**, enjoyed it much more because you could sit still and just learn about other countries. **Thor** and **Clint** did not really have a problem with the type of assignment they had to do. Both staying focused during the lesson regardless of the activity.

Cognitive engagement

Focused attention

Working under pressure

Loki acknowledges that he has a hard time when an assignment needs to be finished in a certain amount of time. This is more so when the assignments are related to writing, spelling and grammar. If he can take his time, he has less problems with staying focused.

Emotional engagement

Activity/lesson enjoyment

Demands

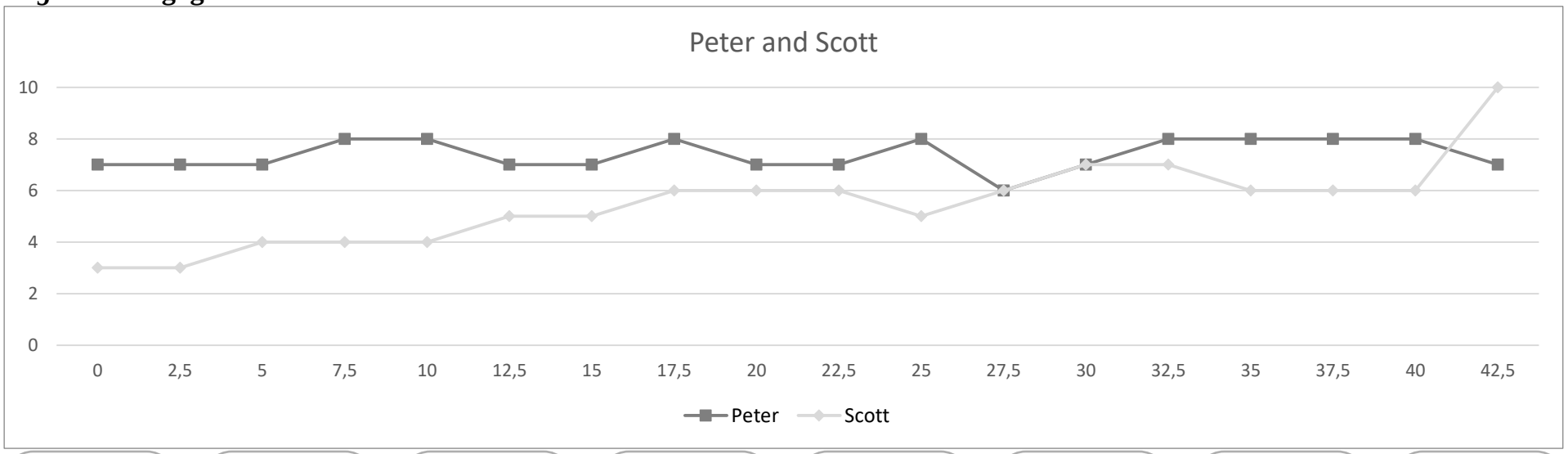
Students can either be under- or overwhelmed by lesson demands. This could manifest differently, with some getting more enjoyment from it, while others did not. **Bucky** acknowledges that his proficiency has risen over the year, but the level has lagged behind. He still likes the class and wants to improve to communicate better with his online friends, although he enjoyed it less when he got the feeling the exercises were too simple. For that reason he did not like the grammar and menu card exercise. He thinks he will be more motivated when he gets challenged more. When things are simple, **Steve** mainly lacks the 'boring' explanations. He likes to get going himself or do something more difficult. **Peter** does not mind when things are easy. He can just put in minimal effort and relax a bit. **Loki** found the level of English to be a bit too high, so this could lead to some difficulties. He does want to keep improving. Regarding the news clip, there were two views. **Tony** enjoyed it, because he did not have to do anything, even though he could not follow most of the things being said. **Phil** (like the girls) did not enjoy the clips, because you have to sit still and watch. He enjoyed it more when the clips were discussed afterwards and he could answers questions about do/does question sentences.

Sense of pride and accomplishment

Class partners

Class partners need to be on the same level to have a positive effect on each other. **Bucky** states that he wanted to talk to **Loki**, because there was just a new seating arrangement. As an effect, he did not pay much attention to the lesson. When he was seated to someone else he did not like, he got the sense he achieved more, because he talked less. **Loki** told he got distracted by **Bucky**'s behaviour. First, he was seated next to a friend who also wanted to get work done. That way **Loki** got distracted less easily. **Phil**, **Tony** and **Wanda** both liked working with someone else to tackle a problem. With **Wanda** it depended on the type of exercise.

Figure 9. **Engagement chart of table 9**



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P: English class is no problem for me. It is easy, so I can relax. That's why I generally like it.

S: English is an important language. Everybody speaks it, everbody learns it.

7,5

P: I like it more when you can do things by yourself instead of listening to the teacher.

S: I like when stuff is easy. If it is difficult I have to think too hard and want to give up faster.

15

S: I finally got it then. The teacher gave a few examples and I got them all correct.

17,5

P: We had to work in silence and alone. I like to work together.

S: All that food stuff I knew it already, so that was easy. I like easy exercises better than more difficult ones. If I have to think more about things, It gets less fun.

25

P: I had to be quiet all the time. I didn't really care for this exercise. I just want to talk with my friends. It is better than working alone.

S: I had a question and it took a while before the teacher came. I wanted to continue with my exercises, but I couldn't.

30

S: The menu card exercises got discussed. I liked that because I could understand it better afterwards.

35

P: The BBC video is alright. We can just watch without doing anything.

S: I went a bit slower, I was a bit tired, didn't really feel like doing things anymore. Usually I can understand what is said in the video.

42,5

S: I was looking forward to the break.

Behavioural engagement

Effort expenditure

Task difficulty

Task difficulty was a factor in showing behavioural engagement. **Scott** and **Bucky** showing that more difficult exercises could lead to quitting the challenge faster. Both trying to tackle it, but eventually giving up if it gets too hard and they do not get sufficient help from their surroundings. **Wanda** showed and noted herself that whenever something would get too difficult, she was not motivated to put in extra effort. **Natasha** showed the opposite. **Peter** and **Clint** had no problems with the difficulty of the exercises, but not resulting in less effort being put in.

Cognitive engagement

Reaction to academic challenges

Quitting the challenge

As shown above, some students do not want to put in extra effort when they get challenged too much. **Scott, Wanda, Bucky, Phil** all showed this behaviour where they rather quit the challenge then tackle it head on.

Emotional engagement

Sense of pride and accomplishment

Sense of improvement

Sense of improvement was a contribution to being more emotionally engaged to the class. During the lesson, **Scott** noted that when getting feedback on the grammar exercise, he knew he could do it correctly. Thus, he enjoyed it more afterwards. More general, at the beginning of the year, he did not like to go to English class, because he got the feeling he did everything wrong. After getting a few good grades, he gained more confidence and a sense he attained a higher proficiency of English. **Gamora** and **Steve** underlined this sentiment. **Thor**, **Phil**, and **Loki** do get the feeling they have become better at speaking, listening, writing, and reading. **Hope** still finds English very difficult, but does feel she becomes a bit better over time, which she enjoys. In contrast, **Peter** and **Bruce** do not acknowledge they have improved from the English lessons. Both saying they already had a relatively high proficiency at the start.

Boredom and disinterest

Lack of active/direct involvement

Boredom and disinterest gets fueled whenever students have to passively listen to the teacher or have to wait for others to finish their exercises. **Peter, Scott, Thor**, **Bucky** and **Steve** all emphasized this just ‘wanting to get on with the lesson/exercise’. **Thor** and **Peter** also explained that they finish their exercises relatively quickly which leads to them distracting others. **Steve** misses the challenge when not actively involved and gets bored quicker. **Scott** also noted that at the end of the lesson he is a bit tired – passively watching a movie did not help in keeping his attention. **Hope** puts the blame on her own mood which is not affected by the English class. If she is a bit grumpy, she do not wants to participate.

Frustration and sense of struggle

Feeling overwhelmed by task demands

Scott does not like when he has to think too hard about certain exercises. He likes to keep things simple. This is combination with his dyslexia leads to him being easier overwhelmed. **Clint** has mostly problems at the beginning of the lesson when he has to 'boot up'. If he gets into it, he understands it better and also likes it more.

Inability to keep up

A few students recognized struggling with certain aspects of the lesson which resulted in disengagement. For instance, **Peter** explained he has difficulties with listening tasks in which things are not repeated or only once. He expressed his frustration that he could not complete exercises because of that and found it unfair that it would not be repeated more than once. **Tony**, **Maria**, **Wanda**, and **Hope** encountered difficulties with all aspects of the lesson, from lexical to grammar exercises. With **Tony**, this stems from the fact he did not have English classes in primary school and did not use it outside of school. **Maria**, like **Wanda** and **Hope**, has learning difficulties which in turn does not aid in completing tasks in time. Furthermore, **Hope** admitted to being tired that day and a bit absent-minded

Social engagement

Supportiveness

Mutual aid in the face of challenges

Like other students, **Peter** benefits from working together on assigments. He did not deem it necessary, but found it more enjoyable to discuss with other students how they approached certain exercises.

Discussion and conclusion

In the current multiple case study, the engagement of a first-year pre-vocational class was investigated during a single English lesson. Data was taken from video- and audio-recording of this lesson and self-reported emotional engagement charts supported by semi-structured interviews. In turn, this revealed and supported the multifaceted and dynamic nature of the construct of engagement. During the lesson and during each activity alternating periods of change and stability were identified. These fluctuations could be attributed to the reciprocity of behavioural, cognitive, emotional, and social components of engagement. The complex interrelationship of these multidimensional components is in line with a CDST perspective (de Bot et al., 2007; van Geert, 2011). The different subcomponents, identified by Sulis (2019), showed that during the lesson the dynamic variability in the engagement of students was not determined by one isolated variable overall, but a result of a combination of different variables interacting in certain specific situations. In this section, each component (and underlying mechanisms) is reflected upon using the following research questions:

1. To what extent does engagement change over the course of the L2 lesson?
2. What do students identify as sustaining or impeding their engagement during the L2 lesson?

The most prominent subcomponents (and their variables) contributing to dynamic fluctuations in engagements throughout the lesson were:

- Behavioural engagement
    - Class participation
        - Teacher and peer influence
        - Value of participation for achievement
        - Activity types and features
    - Initiative-taking
        - Confidence
        - Interest
        - Classroom dynamics
    - Persistence to challenges
        - Value of persistence for learning
        - Difficulty
        - Learning on peers
    - Effort expenditure
        - Activity type
        - Enjoyment
        - Difficulty
- Cognitive engagement
    - Focused attention
        - Task demands
        - Behavioural involvement in activity
        - Task variety throughout lesson
        - Working under pressure
        - Task interest
        - Timing within lesson
    - Reaction to academic challenges

        - Coping through strategies
        - Asking peers/teacher
        - Quitting the challenge
    - Metacognitive strategy use
        - Planning
        - Monitoring
        - Evaluating
- Emotional engagement
    - Activity/lesson enjoyment
        - Task demands
        - Perceived task relevance
        - Topic interest
        - Classroom atmosphere
    - Interest in content material
        - Elements of novelty
        - Opportunities to exchange ideas
        - Relatedness to content material
    - Sense of pride and accomplishment
        - Sense of improvement
        - Sense of reward for effort
        - Sense of contribution to something relevant
    - Boredom and disinterest
        - Lack of active/direct involvement in task
        - Lack of variety throughout lesson
    - Anxiety and fear of failure
        - Feeling of uncertainty
        - Negative peer comparison
    - Frustration and sense of struggle
        - Too much information to process
        - Feeling overwhelmed by demands
        - Inability to keep up
- Social engagement
    - Supportiveness
        - Supportive classroom atmosphere
        - Mutual aid in the face of challenges
        - Peer encouragement
    - Interactiveness
        - Task partners
        - Group dynamics

In general sense, each of these affected itself or one another positively/negatively, thus impeding or sustaining overall engagement. Looking more closely at these variables, some trends can be observed.

Since the charts tracked emotional engagement, sustaining or impeding factors on other components could be more easily identified after the interviews. *Task demands, perceived task relevance, topic interest,* and *classroom atmosphere* showed fluctuations during the lesson, or periods of relative stability when combined with other variables from behavioural engagement. Positive and negative fluctuations could be observed when combined with behavioural engagement factors (*teacher/peer influence, activity types and features, interest, classroom dynamics, learning on peers, enjoyment,* and *difficulty*). For cognitive engagement, *task demands, behavioural involvement, task interest, asking peers/teachers, quitting the challenge* were either positively or negatively affected. Social engagement saw an influence on the whole spectrum of its variables. When sustaining engagement, these variables contributed to an optimal engagement phase for a few students. Students gained energy from activities during a specific moment during the lesson which alleviated the other variables leading to an overall higher engagement. In turn, this could also lead to impeding engagement, where activities were deemed too easy, too difficult, or too boring by students. Thus, a domino effect occurred where all other variables where affected negatively and leading to more impediment.

Emotional engagement and its *interest in content material* and *sense of pride and accomplishment* had an overall positive effect on other variables. *Opportunities to exchange ideas* lead to a more *supportive classroom atmosphere* and *group dynamics* (social engagement). *Sense of improvement* influenced *confidence* and overall *effort expenditure* (behavioural engagement). Negative emotional components such as *boredom and disinterest, anxiety and fear of failure,* and *frustration and sense of struggle* showed interplay with cognitive engagement factors such as *focused attention* and *reaction to academic challenges*. For some students, tackling more difficult assignments lead to frustration and thus, less enjoyment (emotional engagement). For other students, lack of enjoyment or feeling overwhelmed only impeded their attention furthermore (cognitive engagement). As a result, students' behavioural engagement dropped and they were less on-task. It seems that emotional engagement does have a great effect on and may precede other types of engagement. This is in line with Archambault et al. (2009), Skinner et al. (2009), Green et al. (2012), and Pekrun and Linnebrink-Garcia (2012). But it also underlines the intertwined nature of this construct where one aspect cannot be identified without the other.

Results also confirm earlier work done on the different components of engagement. A number of studies identified class participation and initiative-taking as behavioural engagement (Skinner & Belmont, 1993; Birch & Ladd, 1997; Fredricks et al., 2004; Skinner, Kindermann, Connell, & Wellborn, 2009; Heddy, Sinatra, Seli, & Mukhopadhyay, 2014). Fredricks et al. (2004) and Skinner & Pitzer (2012) emphasized the importance of *focused attention* as a factor for cognitive engagement. The latter also naming *metacognitive strategies* (identified moreover by Pintrich & De Groot, 1990; Pintrich & Garcia, 1991; Pintrich, Wolters & Baxter, 2000; Cleary & Zimmerman, 2012). The variables of emotional engagement were also named by a number of other studies (e.g. Finn & Voelkl, 1993; Voelkl, 1995; Finn & Rock, 1997; Yazzie-Mintz, 2007; Wang, Willet, & Eccles, 2011; Finn & Zimmer, 2012; Voelkl, 2012). The subcomponents of social engagement were also in concordance with Wang et al. (2016).

However, Sulis (2019) provided the overall extensive engagement model in which the current study could place and interpret its findings. All components, subcomponents and variables could be placed in the data set apart from the following:

- Cognitive engagement
    - Focused attention
        - Task interest
        - Timing within the lesson
- Emotional engagement
    - Boredom and disinterest
        - Lack of interest in topic
    - Anxiety and fear of failure
        - Low outcome expectations
        - Being on the spot
- Social engagement
    - Interactiveness
        - Nature of learning activities
        - Task topics

This could be due to the fact that only one lesson of one class was observed. Since the limited amount of activities during this lesson some of the above variables could simply not influence engagement.

In general, almost all students showed a decrease in all components of engagement when they had to listen passively to the teacher. With most students just wanting to get on with the lesson/activity, finding the discussion boring, or it taking too long. Although not necessarily seen as a spark that ignites the flame, underlying relationships within the classroom also played an important part whether students were engaged or not. When students showed behavioural disengagement (whether as an effect of emotional or cognitive factors), they tend to disrupt other students as well. This leads to a domino effect where most students are easily distracted because of other students. Interestingly, all students were aware of the noisy environment and a majority was annoyed by it, this in turn did not lead to a more positive social engagement where students made each other aware of their irritation. Gender relationships were neutral for the most part and did not positively affect social engagement. Although this could also be attributed to the seating arrangements. Students who did not find the class cognitively challenging showed more impediment. They argued that exercises were too easy and could be completed relatively quick compared to other students, resulting in disruption. Students who found the class challenging showed either low overall engagement or fluctuating engagement depending on the activity. The news clip at the end showed the biggest discrepancy between students. Students being engaged due to cognitive/emotional interest or low effort expenditure or being disengaged due to cognitive/emotional disinterest or the challenging language level.

Limitations and directions for future research

The current study is not without its limitations, mainly pertaining to longitudinal constraints and their collateral effects. This study was an adaptation of a longitudinal study done by Sulis (2019) on motivation, willingness to communicate, and engagement. Two classes were followed and these constructs were assessed during two lessons. The current study followed only one class and one lesson at the end of the school year. This led to a few students not fully accustomed to the research context. This could be seen in students reacting to the camera as well as the audio recorders, thus showing disengaged behaviour as a result of intervention, instead of the lesson and/or classroom setting. Furthermore, the interview phase was also partly affected by this. Not only the students, but also the researcher, were not fully accustomed to the

semi-structured cued interviews. This lead to the researcher getting the feeling that some questions might be a bit leading and students giving appropriate, instead of honest answers. This would be prevented if there were more lessons filmed and thus more interviews taken. A situated and micro-scale approach that draws on data of 15 learners does not allow generalisations to other L2 learning contexts. Only one lesson of one class taught by one teacher of one target language was investigated. A wider variety of lessons, activities and target languages would have provided a broader picture of the construct of engagement in the L2 classroom. Investigating classes on different levels or different years taught by the same teacher could also contribute to a more extensive view on the construct. During coding, although the first author carried out multiple rounds on the whole data set, discrepancies were not discussed with another researcher. Classroom observations were done by two researchers, but only the interpretation of one was used. Unlike Sulis (2019), an important consideration for this data is the fact that the participants in this study displayed varying degrees of engagement and did not have similar English proficiency. Although participants had signed up voluntarily to the study via their parents' allowance, it was stressed that it was important to take part in the study. This could have pressured some students into taking part with likely showing less motivation. While this does not have a negative implication for the engagement shown in class, it may have hindered their behaviour during the interviews. Two students also noted that they found it difficult to fill in the engagement charts which may imply that the design yields a too large cognitive load for first-year pre-vocational students.

However, this does not imply that the aforementioned limitations yield uninteresting or unreliable data. Due to the severely limited language research done at pre-vocational level, but also for engagement as a dynamic construct, the current study shows that its findings can be related to earlier work done on the different components as engagement, but more importantly also add new insights for further research. Despite these limitations, some implications for L2 language instruction are given. Teachers and students would benefit from knowing about the different factors accounting for fluctuations in engagement. Following the interviews, implementing tasks that require extensive and constant involvement particularly when being performed in small groups, could be beneficial to engagement. In contrast, teacher centric activities seem to trigger drops in engagement, as no student has to actively display engaged behaviour. The learning environment should fit in well with the knowledge, skills and needs of pre-vocational secondary education students. The choice of personally relevant topics and familiar topics also appear to be of great importance to engagement.

In general, a provision of a supportive, highly involving and interactive classroom atmosphere can contribute to sustain engagement. Since activities are the interaction partners with which learners engage, they need to have a clear purpose, be interactive and connected with learners' life and interests, and be varied in nature and short in length.

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Colofon

Auteur:	Laurens Stroop
Titel:	Dynamic changes in the construct of engagement in the pre-vocational second language classroom: a multiple case study
Een uitgave van:	Wetenschapswinkel Taal, Cultuur & Communicatie Rijksuniversiteit Groningen
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Verkoopprijs:	€12,50
Uitgave:	Februari 2020

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Nederlandse samenvatting

Een vraag van een docent Engels aan de wetenschapswinkel Taal, Cultuur en Communicatie van de Rijksuniversiteit Groningen heeft geleid tot een drietal onderzoeken rond de motivatie van VMBO-leerlingen bij de Engelse les. Wat voor kennis en handvatten kunnen er worden aangereikt om leerlingen gemotiveerder door de lessen te begeleiden met uiteindelijk resultaat dat de stof beter blijft hangen.

Wat is betrokkenheid bij de les?

Dit onderzoek richtte zich op *engagement* (betrokkenheid) gedurende een Engelse les van een 1e klas van het niveau VMBO-basis/kader (BBL/KBL). Betrokkenheid bij de les klinkt misschien eenvoudig, maar het bestaat uit verschillende dimensies die je deels kunt waarnemen (gedrag en sommige emoties) en die zich deels in het hoofd van de leerlingen (gedachten, gevoelens) bevinden. De gedragsmatige, cognitieve, emotionele en sociale componenten zijn onderling afhankelijk en vertonen daardoor overlap. Ieder van deze componenten kan daarnaast ook gedurende elk moment in de les veranderen en daardoor weer doorwerken in verschillende maten van betrokkenheid. Bijvoorbeeld een leerling merkt op dat de klasgenoot naast hem/haar snel klaar is met de opdracht. Daardoor kan de ene leerling zichzelf dom voelen, de opdracht opgeven en ook andere klasgenoten gaan afleiden. Terwijl het de andere leerling juist kan motiveren om de opdracht tot een goed einde te brengen met de gedachte: als hij/zij het kan, kan ik het ook.

Engagement onderzoek is door de jaren heen vanuit verschillende theoretische kaders benaderd en vaak ligt de focus op één van de componenten in plaats van op het complexe geheel. Een overkoepelend kader is daarom noodzakelijk om meer begrip te krijgen van deze onderlinge afhankelijkheid. Daarnaast wordt er ook weinig onderzoek gedaan op VMBO-niveau terwijl de meerderheid van de scholieren op dit niveau functioneert. De uitkomsten van dit kleinschalige onderzoek zijn daarom relevant als eerste stap om inzicht te krijgen in het onderwijs aan deze grote doelgroep, zodat de lessen nog beter aangepast kunnen worden op hun behoeften en mogelijkheden.

Betrokkenheid als een samenspel van uitdaging, interactie, variatie en heldere doelen

Een uitgebreid beeld van de verschillende *engagement*-componenten werd verkregen door een combinatie van observaties in het klaslokaal (audio-/video-opnames), zelfrapportages van leerlingen over hun gedrag en reflectieve diepte-interviews met de leerlingen. Op deze manier probeert het onderzoek antwoord te krijgen op de vragen:

1. Hoe verandert de betrokkenheid van leerlingen gedurende de les?
2. Wat beïnvloedt de betrokkenheid in positieve en negatieve zin volgens de leerlingen?

Vanwege de kleinschaligheid van dit kwalitatieve onderzoek is het van belang om het te koppelen aan ander onderzoek, waarmee de betrouwbaarheid van de resultaten toeneemt. Het onderzoek is in opzet gebaseerd op een eerdere studie van Sulis (2019), waarin universitaire studenten meerdere keren in een jaar gevolgd werden bij het leren van de Franse taal. De resultaten van Sulis toonden meerdere overeenkomsten met ons onderzoek.

De betrokkenheid bij de les vertoont wisselende patronen. De leerlingen gaven aan dat ze graag snel aan de slag willen en dan het liefst met hun klasgenoten. Zoals bijvoorbeeld uit het volgende citaat blijkt

"Als de leraar er lang over doet om de opdracht uit te leggen, raak ik de aandacht snel kwijt. Dan denk ik, nou en, dat kan me niks schelen, laat me gewoon aan de slag gaan!"

De betrokkenheid nam sterk af als leerlingen niet uitgedaagd werden óf juist teveel uitgedaagd werden en/of niet geïnteresseerd waren in de stof. Dit leidde tot een zeker sneeuwbaleffect waardoor zij op hun beurt andere leerlingen gingen afleiden.

Dat uitdaging zeer verschillend werkt voor leerlingen, blijkt wel uit de volgende citaten:

"Als er iets nieuws wordt uitgelegd, vind ik het een beetje leuker. Dan kan ik weer iets doen. Maar ik vond de opdracht te gemakkelijk, dus toen was ik weer minder geïnteresseerd."

"Ik vind het leuk wanneer iets gemakkelijk is. Als het te moeilijk is, moet ik te veel nadenken en dan geef ik sneller op."

Volgens Sulis moet de sfeer in de klas ondersteunend, interactief en sterk betrokken zijn om te komen tot de beste resultaten. Dit beeld kwam ook naar voren uit de zelfrapportages en interviews met de leerlingen in dit onderzoek. Ze voelen zich meer betrokken en zetten zich beter in als de activiteiten een duidelijk doel hebben, interactie bevorderen en verbonden zijn met het leven en interesses van de leerlingen. Dat laatste blijkt bijvoorbeeld uit het volgende citaat.

"Ik vond de menukaart opdracht leuk, omdat ik soms met mijn ouders naar een restaurant in Duitsland ga. Daar praten ze Duits of Engels, maar mijn vader verstaat dat niet zo goed, dus dan vraagt hij of ik kan bestellen. Ik vond dit leuk, omdat ik het echt kan gebruiken."

Ook moeten activiteiten volgens de leerlingen niet te lang duren en moet er voldoende variatie in zitten.

Betrokkenheid bij de les bevorderen

Praktische handvatten naar aanleiding van de uitkomsten van deze studie moeten zéér voorzichtig worden opgepakt aangezien er maar is gekeken naar één klas (15 leerlingen) gedurende één les. Voor toekomstig onderzoek is het interessant om te kijken hoe dit bijvoorbeeld verschilt tussen meerdere klassen en/of andere jaarlagen.

Desalniettemin is er enige overeenstemming tussen leerlingen (en vorig onderzoek) te vinden. Een docent zou uitleg tot het minimale moeten beperken zodat leerlingen snel en zelfstandig aan de slag kunnen. De ondersteunende rol van de leraar komt dus meer op de voorgrond. Daarnaast moeten activiteiten een interactief en samenwerkend karakter hebben en aansluiten op de interesses en behoeftes van de leerlingen. Dat vraagt maatwerk en in een

gemengde klas waar het niveau in Engels tussen leerlingen erg kan verschillen, zal dat soms lastig jongleren zijn. Wanneer de docent echter inzicht heeft in de interesses, het niveau en zelfvertrouwen van de leerlingen en hoe betrokkenheid bij de les afhankelijk is van veel verschillende componenten, kan hij/zij daar wel beter gebruik van maken.